

COMMITTEE WORKSHOP
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)	
)	
Proposed Amendments - Phase II)	Docket No.
Home Energy Rating System)	08-HERS-2
Program Regulations)	
_____)	

CALIFORNIA ENERGY COMMISSION
HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

WEDNESDAY, OCTOBER 15, 2008

10:00 A.M.

Reported by:
Peter Petty
Contract No. 150-07-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMISSIONERS PRESENT

Arthur Rosenfeld, Presiding Member

Jackalyne Pfannenstiel, Associate Member

ADVISORS and STAFF PRESENT

David Hungerford, Advisor

Helen Lam, Program Manager

Bill Pennington

Bruce Maeda

Rashid Mir

ALSO PRESENT

Jeff Chapman
California Living & Energy

Bob Knight (via teleconference)
BKI

Erik S. Emblem
3E International, Incorporated
Joint Committee on Energy and Environmental Policy
California Sheet Metal and Air Conditioning
Contractors National Association
California Local Unions of the Sheet Metal Workers

George Nesbitt
Environmental Design/Build

Thomas P. Conlon
GeoPraxis
Energy Checkup

Robert A. Scott
California Home Energy Efficiency Rating Services

Michael G. Hodgson
ConSol

ALSO PRESENT

Bruce Cenicerros
Sacramento Municipal Utility District

Mark Kamrath
Bell Products, Inc.

Michael E. Bachand
CalCERTS, Inc.

Jon McHugh
McHugh Energy

Randel Reidel
California Building Performance Contractors
Association

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P R O C E E D I N G S

10:00 a.m.

PRESIDING MEMBER ROSENFELD: Good

morning. Welcome to HERS. I'm Art Rosenfeld; I'm going to be presiding for today on behalf of the Efficiency Committee. On my right is Commission Chairman Jackie Pfannenstiel, who is the Associate Member of the Committee. On my left is David Hungerford, my Senior Advisor.

And I think I'll get the staff to introduce themselves, starting with Bill Pennington.

MR. PENNINGTON: Good morning, I'm Bill Pennington.

MR. MAEDA: Bruce Maeda.

PRESIDING MEMBER ROSENFELD: And welcome. I think we might go directly to Helen Lam, who is going to officially welcome us and tell us where the exits are.

MS. LAM: Sure. Good morning, everybody. Thank you for coming to the California home energy rating system of the HERS program, phase II rulemaking hearing.

My name is Helen Lam and I'm the Project Manager for the HERS contract, and also

1 facilitator of this meeting.

2 Before I kick off today's meeting I want
3 to quickly go through some of the standard
4 housekeeping items. For those of you who may not
5 be familiar with this building, first of all the
6 restrooms are located out the door to your left.
7 We also have a snack bar up on the second floor.

8 And in the event of any emergency and
9 the building is evacuated, please follow our
10 employees to the appropriate exits. We will
11 reconvene at Roosevelt Park, which is located
12 diagonally across the street from this building.
13 Please proceed calmly and quickly, again following
14 the employees with whom you're meeting, to exit
15 the building.

16 This meeting is the Efficiency
17 Committee's public hearing regarding proposed
18 amendments to the HERS regulations related to
19 whole house energy ratings for existing and newly
20 constructed homes.

21 We refer to this as phase II of HERS,
22 which expands the existing program to include the
23 California HERS index calculations, utility bill
24 analysis, cost effectiveness of energy efficiency
25 measures, and whole house energy ratings, and

1 certifications of different individuals and
2 entities that would be involved in the California
3 HERS program.

4 The Committee will take public comments
5 during today's meeting. As you can see on the
6 agenda we will have the public comment period
7 following the staff's presentation. And we ask
8 that anyone wishing to make comments to fill out
9 one of these blue cards so that we may advise the
10 Presiding Member as to who needs to speak.

11 When you come up to the podium to speak,
12 each time please state your name and organization.
13 This is for the benefit of the court reporter.
14 And if you have a business card, please hand it to
15 him, as well, to insure that your name is spelled
16 correctly.

17 There are copies of the hearing agenda
18 and today's presentation available in the foyer.
19 We also have a limited number of copies of today's
20 efficiency hearing notice and the notice of
21 proposed adoption on the table.

22 There are display copies of the express
23 terms and the HERS technical manual for your
24 reference, as well. Please do not remove the
25 display copies, as these and all other rulemaking

1 documents, including today's presentation, are
2 available online.

3 The rulemaking documents include the
4 notice of proposed adoption, the initial statement
5 of reasons, the express terms and the HERS
6 technical manual, which will be incorporated by
7 reference.

8 This meeting is being recorded, and the
9 transcript will be posted online within two weeks.
10 Today's meeting is also being broadcast over the
11 internet. Anyone wishing to participate by
12 telephone call, please call 1-888-282-0366; the
13 passcode is HERS and the call leader is Helen Lam.

14 Today's meeting is for the Committee to
15 consider possible amendments related to the HERS
16 proceeding. The 45-day public comment period with
17 respect of the HERS phase II rulemaking started on
18 October 3rd. We will accept comments up to 10:00
19 a.m. on November 19th, which is the scheduled day
20 for possible regulations adoption by the Energy
21 Commission at its November 19th business hearing.

22 Modification to the 45-day language may
23 be required, and the modified text or the 15-day
24 language will be made available at least 15 days
25 prior to the noticed Energy Commission adoption.

1 The earliest possible adoption date for the 15-day
2 language is at the December 17, 2008 business
3 meeting.

4 Now, I will turn the meeting over to
5 Rashid Mir of the HERS program staff who will walk
6 us through the presentation slides.

7 MR. MIR: Good morning. My name's
8 Rashid Mir with the buildings and appliances
9 office. This is the presentation. I'm going to
10 start with the scope and application section.

11 The HERS regulations and HERS technical
12 manual specify the requirements for ratings and
13 audits. We need to consistently rate occupied and
14 unoccupied homes. Occupants should be considered
15 in developing the recommendations.

16 The objective of this rulemaking is to
17 complete the implementation of the HERS program
18 pursuant to Public Resources Code section 25942.

19 Public Resources Code section 25942
20 requires ratings based on a single statewide
21 rating scale; it requires estimates of potential
22 utility bill savings; requires recommendations on
23 cost effective measures to improve energy
24 efficiency; and requires labeling procedures.

25 There are many cost effective energy

1 efficiency improvements for homes that are built
2 before and after the start of the building
3 standards in California.

4 This graph from Loren Lutzenhiser shows
5 a large variation in energy use in existing homes.

6 The next section will be on the HERS
7 reports. This is the sample rating certificate.
8 Score zero on the right side indicates the best
9 energy performance. And a score of 250 on the
10 left indicates poor energy performance.

11 The home on this sample certificate has
12 a score of 155, and a standard home would have a
13 score of 100.

14 The rate includes the Title 24 energy
15 uses, and it also includes lighting, appliances
16 and exterior lighting attached to the building.
17 Exterior energy uses not attached to the building,
18 such as landscape lighting, would be evaluated in
19 the recommendations.

20 If the home has onsite renewable
21 generation two ratings will be produced, showing
22 the building's energy efficiency features and
23 without the -- and with the onsite renewable
24 energy.

25 The standard approach for rating

1 recommendations is required. The rater can use
2 the optional custom approach to tailor
3 recommendations for the homeowner.

4 California home energy audit is the
5 first five steps of -- first five out of seven
6 steps of the whole house home energy rating. This
7 is a sample home energy audit certificate. It has
8 the same information as the rating certificate.
9 The only thing that's missing is the index.

10 Next group of slides will be on energy
11 modeling. The California HERS index is the ratio
12 of the time-dependent valued energy use of the
13 rated home to the TDV energy use of the reference
14 home.

15 If the rated home is larger than 2500
16 square feet, the TDV energy for the reference home
17 shall be based on a reference home size of 2500
18 square feet.

19 Emissions of greenhouse gases associated
20 with the energy consumption for the home shall be
21 estimated in the HERS reports.

22 The HERS system modeling rules are based
23 on the 2008 residential alternative calculation
24 method approval manual. However, HERS ratings
25 will include lighting and appliance energy uses

1 that are not included in the standards.

2 The HERS equipment energy use is
3 estimated based on the RASS 2004 survey of
4 existing homes. Most of the, you know, plug-in
5 equipment will move with the occupants when the
6 occupants move.

7 Similarly for lighting. Most table
8 lamps and floor lamps are going to move with the
9 occupants at change of occupancy. The HERS
10 lighting energy use is also estimated based on the
11 RASS 2004 survey of existing homes.

12 Next section will be on rating
13 recommendations. Reasonable estimates of
14 potential utility bill savings and reliable
15 recommendations on cost effective measures to
16 improve energy efficiency are required by Public
17 Resources Code section 25942.

18 The red text indicates significant
19 changes since the August hearing. The standard
20 approach shall evaluate measures in the listed
21 groups starting with building envelope measures
22 and then move into the next group of measures.
23 All measures within a group shall be ranked.

24 The standard approach recommendations
25 shall include all measures that are cost

1 effective. The custom approach can base cost
2 effectiveness on the needs of the homeowner.

3 The standard approach cost effectiveness
4 uses an after-tax cash flow method. The original
5 basecase is the home with the high annual energy
6 costs. For each measure the after-tax cash flow
7 is based on the reduced annual energy costs, the
8 increased annual mortgage payment due to the
9 installed cost, and a lower tax amount based on
10 the increased mortgage payment.

11 The custom approach cost effectiveness
12 should be based on the homeowner, and can include
13 nonenergy benefits.

14 The utility rates for the standard and
15 custom approaches will be the most common rates
16 for the actual rates for a home or the most common
17 rates in that area. And it shall be the same for
18 the standard and custom approaches.

19 That's the end of the slide show.

20 PRESIDING MEMBER ROSENFELD: Okay. Oh,
21 Chairman Pfannenstiel has some remarks.

22 ASSOCIATE MEMBER PFANNENSTIEL: Just
23 actually a question.

24 The scale that we ended up with, the
25 sort of backward scale from zero to high numbers

1 with zero being good and high numbers being bad, I
2 remember at our last hearing we spent a lot of
3 time talking about various possible scales.

4 How did we -- could you just remind me
5 of the rationale for that one?

6 MR. PENNINGTON: Sure. The basic
7 underlying idea of the scale parallels the
8 development of HERS ratings at the national level,
9 both the RESNET program developed the scale, you
10 know, and got buy-in from the mortgage industry
11 and other states that are doing ratings.

12 Kind of a separate acknowledge of this
13 scale or, you know, endorsement of the scale came
14 from DOE in setting their high-efficiency
15 buildings program that they're working with home
16 builders around the U.S. related to that.

17 One of the comments that we got at the
18 last workshop was that -- was how big of a range
19 should the scale be. And at the last workshop we
20 were proposing to have a scale that went between
21 zero and 150. And there was quite a bit of
22 comment that you may get a fair portion of all the
23 buildings that exist that have scores higher than
24 150. And so perhaps that is not the appropriate
25 place to cut it off.

1 So one of the things we did in response
2 to those comments was to lengthen the scale so it
3 would go out to 250. That's expected to capture
4 the vast majority of existing buildings.

5 ASSOCIATE MEMBER PFANNENSTIEL: And when
6 you say that this scale parallels those being
7 developed nationally, do you mean it's the same
8 concept as to the backward --

9 MR. PENNINGTON: Yes.

10 ASSOCIATE MEMBER PFANNENSTIEL: -- set
11 of positive numbers?

12 MR. PENNINGTON: Yes, with zero being
13 what we're trying to shoot at in terms of getting
14 to zero energy. And code level buildings being
15 assigned a score of 100. And then calculating the
16 score for higher energy using buildings based on
17 those two points is how the scale is derived.

18 ASSOCIATE MEMBER PFANNENSTIEL: Thank
19 you.

20 PRESIDING MEMBER ROSENFELD: Any other
21 comments? David?

22 So, I guess we start with public
23 comment. And the first one I have is from Jeff
24 Chapman from California Living and Energy. Good
25 morning.

1 MR. CHAPMAN: Thank you very much. In
2 the process of rulemaking there's lots of work
3 being done by Commission Staff and those of us who
4 attend the workshops. And there's also a lot of
5 information that gets promulgated throughout the
6 industry. And my question addresses more the
7 issue of the information being promulgated than
8 actual fact, possibly.

9 As you view all of this, Commissioners,
10 and you look at utility companies and IOUs, one of
11 the things that's been suggested is that building
12 performance contractors or California whole house
13 home energy raters and California home energy
14 inspectors might have preference in utility
15 companies' minds for payments for work being done,
16 as opposed to just the HERS rater.

17 Have you heard anything about that? Or
18 is that feasibly even possible?

19 MR. PENNINGTON: What we've been trying
20 to do here is build a structure that would allow
21 several different possible delivery mechanisms for
22 ratings. And so each of the ones that you
23 mentioned are services tat exist in the
24 marketplace now that we're trying to bring under
25 one umbrella and have reasonable standardization

1 across what those people are doing and quality
2 control and collection of data in a consistent
3 way. And attempting to meet the statutory
4 requirements of consistent ratings and reasonable
5 recommendations on cost effectiveness.

6 And so we're trying to set up a
7 mechanism where all of those entities can have a
8 role as we proceed.

9 It's our expectation that in the future
10 utility incentives programs, or perhaps other
11 kinds of incentives programs or recognition
12 programs, would value having a California home
13 energy rating through one of these service
14 providers. And that that would qualify homes for
15 incentives down the line.

16 But I don't know if I can go beyond that
17 and, you know, respond to your rumor question, you
18 know, I --

19 MR. CHAPMAN: Yeah, and unfortunately
20 this is the kind of thing that happens, you know.
21 And when you're in your office an hour and a half
22 away from here, and you see emails that are
23 propagated, you don't know if it's actual, factual
24 or not. So I just asked the question. And I
25 appreciate your answer.

1 And what I heard you say is, indeed, as
2 I read, there will be three opportunities for
3 homeowners to use a rater as long as not only the
4 HERS rater, but the other two, are certified by a
5 provider. And that they, in their certification,
6 they meet the standards needed for construction
7 and everything else.

8 And that those could be used. And that
9 the Commission would prefer that those three
10 options be used, and no preference being given to
11 any two or one.

12 MR. PENNINGTON: Correct.

13 MR. CHAPMAN: Thank you very much.
14 Appreciate your time.

15 PRESIDING MEMBER ROSENFELD: Thank you.

16 MR. MAEDA: Bruce Maeda, Energy
17 Commission Staff. I want to point out that
18 actually raters are involved in all three of the
19 models that we've mentioned.

20 The building performance contractors, in
21 order to be part of this program, must be raters,
22 must be trained as raters and certified as HERS
23 raters, and QA'd by HERS providers.

24 HERS raters also must supervise home
25 inspectors and essentially sign off on the rating

1 if they actually develop a HERS rating and index.
2 So HERS raters are involved on every single one of
3 these business models.

4 MS. LAM: This is just to let the
5 speakers who are coming up to be sure to speak
6 into the mike to assure that everybody in the room
7 can hear them. Thank you.

8 PRESIDING MEMBER ROSENFELD: Bob Knight
9 has a blue card. Whoops, after Helen told me to
10 speak into the mike, mine was off. I'm sorry.

11 (Laughter.)

12 PRESIDING MEMBER ROSENFELD: Bob Knight
13 has a blue card.

14 MR. SPEAKER: He's actually online.

15 ASSOCIATE MEMBER PFANNENSTIEL: Oh, he's
16 online.

17 PRESIDING MEMBER ROSENFELD: He's
18 online?

19 MR. SPEAKER: Yes.

20 PRESIDING MEMBER ROSENFELD: Oh, okay.

21 (Pause.)

22 MR. PENNINGTON: Can you have the
23 operator request him to speak?

24 MS. LAM: Chang, can you just have the
25 caller to just speak?

1 MR. KNIGHT: This is Bob Knight.

2 PRESIDING MEMBER ROSENFELD: Good
3 morning.

4 MR. KNIGHT: I don't have a lot of
5 comments to make today or questions. I'm going to
6 file written comments.

7 I just want to make just one comment
8 about the rating scale. I think it's an
9 improvement to have at 250 instead of 150. You
10 know, looking at it it makes me think that that
11 logically is going to make a lot of people think
12 their house is a little better than it is because
13 it's going to be just closer to the middle than it
14 would be if the rating scale were only at 150 or
15 something less than 250.

16 If you just think about sort of the
17 middle ground, I'm not sure that's what you get,
18 somewhere around 200; whether it actually makes
19 any sense or it will make any difference to have
20 the ceiling go any higher.

21 PRESIDING MEMBER ROSENFELD: Bill
22 Pennington, do you -- I'm sorry, did we cut you
23 off in mid-sentence, Bob? Go ahead.

24 MR. KNIGHT: Just one broader comment.
25 I'm going to elaborate on this in my written

1 comments. I do have a continuing concern that we
2 have over-specified what contractors and raters
3 are going to have to do that will lose an awful
4 lot of flexibility from the prospects.

5 But rather than spend any time on that
6 today, I'd like to give it a little more thought;
7 read the regs a little bit more closely; and
8 follow up with comments.

9 PRESIDING MEMBER ROSENFELD: Does staff
10 want to make any comments on the proverbial zero
11 to 250 scale?

12 Bob, I guess we've addressed that in
13 Bill Pennington's answer to Chairman Pfannenstiel.

14 MR. KNIGHT: Yes, I don't really need an
15 answer. I just wanted to make that comment.

16 PRESIDING MEMBER ROSENFELD: Okay.
17 Thank you very much, Bob.

18 The next blue card is from Erik Emblem
19 -- I hope I'm pronouncing it correctly -- from
20 the Joint Committee on Energy and -- can't read
21 it. You'll finish reading for me.

22 MR. EMBLEM: Can't read my writing?
23 I'll finish for you, Mr. Chair.

24 My name is Erik Emblem and I'm a private
25 consultant with Three 3 International. And I'm

1 here today representing the Joint Committee on
2 Energy and Environmental Policy. This is a joint
3 committee that was formed by the California Sheet
4 Metal and Air Conditioning Contractors National
5 Association and the California Local Unions of the
6 Sheet Metal Workers.

7 And I'm here today to speak in favor of
8 the proposal as it sits, and commend staff and the
9 support people that put this together.

10 I think our comments are that we think
11 this is a good, a really good start at addressing
12 the residential field and energy, and looking at a
13 whole house concept. And that there should be
14 some achievable energy savings.

15 Another thing I'd like to point out, as
16 with any regulation that you prompt, and that is
17 consistency and uniformity of enforcement. And
18 you'll probably hear that ringing from me at other
19 hearings, too. But our contractors support these
20 things and they just usually are concerned about
21 when they're implemented, how they're going to be
22 enforced. And with some of the other codes, not
23 just energy codes, but it depends on which code
24 authority and where you're at in the state and how
25 they're applied.

1 So, again, we commend you. I think it's
2 a great effort by Bill and the staff. And if
3 there's some things we can do to help you further
4 this along, we volunteer.

5 Thank you, Mr. Chairman.

6 PRESIDING MEMBER ROSENFELD: I'm sure
7 the staff thanks you. Excuse me while I get my
8 cards in order here.

9 George Nesbitt from CalHERS. Good
10 morning, sir.

11 MR. NESBITT: Good morning. George
12 Nesbitt representing CalHERS. We represent the
13 independent third-party raters in California.

14 I want to address a couple of the issues
15 surrounding building performance contractors. We
16 believe allowing the building performance
17 contractor to provide an index on jobs that they
18 do work is a conflict of interest. It's not
19 consistent with how we treat new homes.

20 And as the Energy Commission has opened
21 up hearings against Masco for alleged violations
22 of conflict of interest, with hearings set in both
23 November and December, you know, it's something we
24 care deeply about.

25 California, believe it or not, is

1 actually a leader on the subject of conflict of
2 interest. RESNET allows a contractor to also be a
3 rater as long as they disclose. Whereas we
4 prohibit. And apparently some of the other states
5 kind of actually follow our rule. And they're
6 actually looking at us to see whether we hold to
7 that.

8 So we have the opportunity to maintain
9 that leadership position in the rest of the
10 country when it comes to the existing home market.
11 And as someone who is actually a building
12 performance contractor, also, I see value in
13 having an independent third-party rater overseeing
14 my work. And since the regulations call for only
15 5 percent verification, you know, I imagine that -
16 - you know, I'd propose that we have raters do at
17 least one in seven, which is a lot more than 5
18 percent.

19 The other issue that I don't think has
20 been addressed with building performance
21 contractors is the issue of contractor licensing.
22 Do they have to be a licensed contractor? Do they
23 have to be properly licensed for the work they do?
24 Because there are those that aren't, and haven't
25 been.

1 Also, back on the issue of index, and
2 another possible solution to it is allowing
3 building performance contractor to do the audit,
4 but only allow the index be done at the program
5 level for program information, but not allow it to
6 give value to the homeowner, you know, for
7 anything other than a utility program.

8 So, anyway, so that's what we have to
9 say for building performance contractors with
10 these regulations. That's our main point.

11 PRESIDING MEMBER ROSENFELD: I'm sorry
12 that I don't think I understood your last point.
13 It was a question -- say it again.

14 MR. NESBITT: My last point is that
15 allow the building performance contractor to
16 provide an audit which does not include the HERS
17 index. And allow the HERS index to only exist at
18 PG&E and SMUD, at a program level for their
19 benefit. But not allow that index to be provided
20 as a HERS rater would provide it to a customer for
21 an energy efficient mortgage, or other type thing.

22 So that --

23 PRESIDING MEMBER ROSENFELD: I'm sorry,
24 this is the rating performed by a contractor?

25 MR. NESBITT: Yeah, because the way the

1 regs are written the building performance
2 contractor can perform the index on jobs that they
3 do the improvement work on.

4 So, that's what we have to say about --
5 that's all CalHERS has to say at the moment. I
6 can either fill out another card and make my
7 personal comments, or I can stay up here and say a
8 few more.

9 PRESIDING MEMBER ROSENFELD: Well,
10 first, you've raised three points already. And I
11 guess I should ask the staff if they want to
12 respond.

13 MR. PENNINGTON: Well, pardon me.

14 PRESIDING MEMBER ROSENFELD: Here's Bill
15 Pennington.

16 MR. PENNINGTON: The approach that we
17 proposed here recognizes that building performance
18 contractors add value with their engagement in a
19 whole project from beginning to end. And can add
20 value in terms of communicating the
21 recommendations effectively to the consumer. And
22 for dealing with issues that come up onsite with
23 the implementation of particular measures.

24 So, they add value from the vantage
25 point of polishing the practicality of the

1 recommendations that would come out of a rating.

2 And following through to see that they're

3 implemented. That's on the plus side.

4 On the minus side there can be potential
5 conflicts of interest with the rater and the
6 contractor being the same entity. And so we
7 purposely added provisions into these proposed
8 regulations that would endeavor to mitigate the
9 conflicts of interest and provide substantially
10 more oversight to obligate the approval of
11 building performance contractors to be a separate
12 approval through the Energy Commission that would
13 get scrutiny at that point in time related to how
14 the program would be delivered. And, you know, is
15 all the oversight there that we anticipate.

16 And so we think we have walked a middle
17 ground between -- to accomplish the advantages
18 that this particular service provider can bring
19 with the potential concern related to conflicts.

20 And so we've tried to be explicit about
21 that in what we propose, and take on the issue of
22 the conflict directly, and try to propose ways to
23 mitigate it.

24 PRESIDING MEMBER ROSENFELD: And I guess
25 George Nesbitt is saying he's not convinced. But

1 there we go. Okay.

2 MR. NESBITT: HERS raters aren't, but --

3 PRESIDING MEMBER ROSENFELD: On behalf
4 of the HERS raters. Okay.

5 You wanted to make your own private
6 comments?

7 MR. NESBITT: Yeah. The rest of my
8 comments of my private Environmental Design Build.
9 I'd like to thank staff and the Commission for
10 making some of the changes since the last
11 workshop. I think there have been some positive
12 changes in the right direction.

13 And I'd also like to say I've actually
14 been to all the workshops and I've read everyone's
15 comments. And I've generally been very impressed
16 with everyone's comments and their ideas. And
17 there's a wealth of good ideas that could and
18 should still be implemented.

19 On the down side I think removing the
20 post-retrofit bill analysis is not a good thing.
21 Although I do agree with the CBPCA that I think
22 providing that information back to the customer is
23 not necessarily the best thing. But I think from
24 a standpoint of collecting data, verifying
25 prediction methods, the modeling, it's a very

1 valuable tool. And it should be done by us raters
2 also when we are aware, or the utility is, when we
3 are aware that retrofits actually have happened.

4 And -- well, I submitted 14 pages of
5 comments from the last meeting. And I'm sure I
6 will submit more written comments, so I'll leave
7 it at that for now. Thank you.

8 PRESIDING MEMBER ROSENFELD: I'm being
9 slow, I guess I'm going to actually ask this. You
10 say -- come back, if you don't mind, George.
11 Sorry.

12 MR. NESBITT: That's okay.

13 PRESIDING MEMBER ROSENFELD: I've been
14 thinking about this mainly as the initial auditor
15 rating. Do I understand that if an audit is made,
16 that there is a post -- there's a second post-
17 retrofit inspection every time? Bruce?

18 MR. MAEDA: We removed the requirement
19 for building performance contractors to have a
20 post-retrofit bill analysis, but there still is an
21 option that that can be offered.

22 There's a lot of complications with
23 being able to enforce the followup in any event,
24 but it is still there as an option and we could
25 still -- it could be required, for example,

1 utility programs and we can still gather the data
2 somehow. But we have to set that up.

3 PRESIDING MEMBER ROSENFELD: So now it's
4 optional?

5 MR. MAEDA: There's no longer a
6 requirement for performance contractors.

7 PRESIDING MEMBER ROSENFELD: And you,
8 George Nesbitt, is saying you think it should be
9 required?

10 MR. NESBITT: Yeah, I think it's
11 valuable. I mean as someone who has been doing
12 HERS ratings for seven years, I have consistently
13 found that the modeling typically over-predicts
14 energy use, especially on smaller homes in the Bay
15 Area.

16 And so all the predicted savings are all
17 -- it's all fantasy. So I actually got
18 frustrated, you know, seven years ago and quit
19 doing it. And had gone back to utility bills and
20 developed a spreadsheet five years ago. Actually
21 since the last meeting I finally got it right. I
22 can finally calculate things on tiers, the actual
23 value of an improvement and its effect on tiers.
24 It's complicated.

25 And when I have utility bills I can base

1 all my saving predictions on the reality of what
2 their current consumption is. And so I think it's
3 very valuable, a) that when we have utility
4 billing data upfront, that we use that to make the
5 predictions. And then make the post-retrofit.

6 We need to tune the model upfront, as
7 well as the prediction. And I don't think we've
8 done that work very well. And it's the persistent
9 problem with HERS ratings, is that it's
10 theoretical and not actual-based.

11 So, I will actually probably submit pds
12 of my spreadsheets. Hell, I could submit the
13 spreadsheets because quite frankly I could use
14 someone to figure out some of the formulas for me.

15 (Laughter.)

16 MR. NESBITT: But it's just -- I think
17 it's a disservice to the customer if we predict
18 savings that on energy and cost they're not
19 incurring.

20 And I find it hard when I don't have the
21 utility bill data because it's just a total guess.
22 And I know it's a wrong guess. And so in a way
23 then I want to shy away from any savings
24 predictions other than maybe saying you're going
25 to improve your house by X percent, you know. Or

1 you're going to reduce your heat load, you know.

2 But trying to predict what they're
3 actually going to pay and then what they're going
4 to save is scary. So.

5 PRESIDING MEMBER ROSENFELD: Is there --
6 I'm asking the three of you, is there any
7 mechanism for incentives for the followup audit?
8 I mean do the utilities give any incentives for
9 this relatively valuable sounding information,
10 sounds to me?

11 MR. PENNINGTON: Well, that's quite
12 possible. Of course, these regulations don't
13 address what the utilities do in their incentive
14 programs, you know. They're trying to set up a
15 structure of how to carry things out.

16 I mean in order to do the post-retrofit
17 analysis, you have some distance between the time
18 that a HERS rater is engaged to do a rating and
19 the consumer using that information, making
20 decisions about what they want to invest in,
21 obtaining financing, getting the work done. And
22 then a time period for which -- a year for which
23 the utility bills would accrue so that you could
24 do a post-retrofit analysis and evaluate the
25 effect on energy bills against what the rating

1 produced.

2 And, in general, the rater is not
3 engaged with the consumer over that long period.
4 And so it's fairly impractical to expect that that
5 would happen a hundred percent of the time. Or to
6 require it.

7 It's, you know, there's a provision for
8 it. The idea's laid out in these regulations as
9 an option. It's something that potentially we
10 could encourage the utilities to promote through
11 incentives.

12 It requires a very long connection
13 between the rater and the consumer to actually get
14 it done.

15 MR. NESBITT: Ideally we, as independent
16 raters, if the work is done we come back and
17 verify it. I mean that's the ideal scenario is we
18 give that independent rating up front. They hire
19 contractors and we come back to help try to
20 protect them and make sure the work gets done
21 right.

22 The code may kick in and require some
23 items be verified. And in that case we hopefully
24 would have the connection.

25 But if I understand it right, the way

1 utilities get to claim savings now is purely off
2 of like Title 24 calculations. Oh, your house is,
3 you know, 15 percent above code, and therefore we
4 saved X amount of energy.

5 You know, I don't know how much they
6 have to prove real savings versus calculated
7 savings, but I think it's important.

8 ASSOCIATE MEMBER PFANNENSTIEL: But, Mr.
9 Nesbitt, to Mr. Pennington's point about having a
10 year's worth of utility bills to go back and do
11 that calculation, is that what you use? Or do you
12 use some subset of that? How do you do -- what
13 does your spreadsheet require in terms of number
14 of bills --

15 MR. NESBITT: A year's worth of bills.

16 ASSOCIATE MEMBER PFANNENSTIEL: So you
17 do have a continuing --

18 MR. NESBITT: Yeah, two years is better,
19 you know. I mean, the nice thing if people have
20 online accounts with PG&E I can get two years of
21 data. But if I fill out a request form where the
22 customer authorizes me to get it, can only get
23 one year.

24 I don't see a big problem with it being
25 a year of post-retrofit. There may be a gap

1 between the audit and when the work happens, but,
2 you know, if the work happens, especially through
3 a utility program, I think then we, you know, or a
4 HERS rating, we have a mechanism for knowing work
5 is being done. And then being able to do the post
6 analysis.

7 I mean it could happen at the utility
8 level. It may be more practical than at the rater
9 level. But I think it's an important thing.

10 ASSOCIATE MEMBER PFANNENSTIEL: But you
11 do this for every one of your customers?

12 MR. NESBITT: I haven't done so much the
13 post analysis at the moment. But I try to, when I
14 have utility bills I do it upfront. I mean I've
15 been trying to go off of real bills. And it's
16 work.

17 I can actually, with the exception of
18 high-use customers, I can break down fairly
19 accurately where their energy use is going. The
20 high people, you know, lighting becomes this big,
21 you know, wild card, or they've got, you know,
22 they're doing crazy things with pool pumps and
23 whatnot. And some of it you can quantify. It's a
24 little difficult.

25 But, you know, it's -- you know, we've

1 got good data with the 2004 residential appliance
2 saturation survey. And, you know, we have some
3 good information to roughly go off of.

4 And with the bills, at least you're
5 going to be off less, you know. You know how big
6 the pie is. You may be off a little bit here and
7 there, but with a just, you know, standard rating,
8 you know, you can say the pie is twice as big as
9 it is. And so you're that much more off. So,
10 anyway.

11 PRESIDING MEMBER ROSENFELD: Okay.
12 Thank you very much. Bruce.

13 MR. MAEDA: Bruce Maeda, Energy
14 Commission Staff. I want to point out that one of
15 the reasons why we removed this provision for
16 performance contractors where the connection is
17 there for a little longer period of time is that
18 something Bob Knight mentioned, one of the
19 reasons, not the only one, was that the consumers
20 often will take back some of their -- a good
21 portion of their energy savings.

22 And so you confuse the issue as to
23 whether or not the retrofit worked or did not
24 work.

25 PRESIDING MEMBER ROSENFELD: Rashid.

1 MR. MIR: Rashid Mir, Energy Commission
2 Staff. The other thing is we removed the post-
3 retrofit, but at the time a rate of the utility
4 bill analysis is required. So, raters are
5 expected to collect the bills and enter the
6 information into the software, and do a utility
7 bill analysis, which would compare the simulation
8 to the bills.

9 And if the numbers are off because the
10 homeowner is using too much energy or too little
11 energy, or there's something wrong with the
12 simulation, then that's a disclosure that the
13 rater is supposed to let the homeowner know that
14 this analysis says there's something wrong here.
15 So we need to take the rater's recommendations
16 with a grain of salt. Or we need to go back and
17 look at it and do a custom approach and get
18 closer.

19 PRESIDING MEMBER ROSENFELD: Okay, I
20 will huddle with the staff. We can talk to the
21 utilities and see if there's any interest in an
22 incentive for a post-retrofit. Okay.

23 I don't think I can read the next
24 handwriting. Mr. or Ms. Conlon? Mr.

25 (Laughter.)

1 MR. CONLON: Thank you. Conlon,
2 C-o-n-l-o-n, Tom Conlon with GeoPraxis and Energy
3 Checkup, a service of GeoPraxis. I put my card in
4 there so that was why my handwriting was so
5 sketchy there. Sorry about that.

6 My question was really to just explain
7 what has changed in the rulemaking and the
8 regulations since the August 14th hearing. And
9 understand why, what the rationale between those
10 changes, what those changes might be. And then
11 I'd kind of like to follow up on perhaps that.

12 PRESIDING MEMBER ROSENFELD: When do you
13 want to do this?

14 MR. CONLON: I was hoping that I could
15 -- the presentation did not really segment out
16 what had changed from our last meeting. And so I
17 saw some red type in the presentation and I wanted
18 to understand if, for example, the cost effective
19 methodology had been changed, as it appears to
20 have been changed. And to understand the
21 rationale behind why those changes were made.

22 PRESIDING MEMBER ROSENFELD: How do you
23 want to handle this? Rashid did rush through the
24 graphs, I --

25 MR. MIR: We changed the rating scale to

1 250 from 150, and that was mostly so that the
2 existing homes, when they show an improvement,
3 that they don't stay off the scale. That was one
4 of the main reasons based on comments from the
5 previous workshop.

6 On the slides, it starts at slide 27.
7 The standard approach cost effectiveness. Before
8 we were looking at all measures and doing rankings
9 of all measures. Now we're saying we want you to
10 group measures.

11 So, for example, we want you to start
12 with building envelope measures. And evaluate
13 those building envelope measures in that group.
14 Find the most cost effective within that group.
15 That would be the first measure you would
16 implement. And then you go to the next measure
17 and the next measure until you're done with
18 building envelope measures that are cost
19 effective.

20 Once you're done with that group, then
21 you would move to the next group.

22 MR. CONLON: And what was the rationale
23 for making building envelope measures the first
24 measure to be analyzed? Was there some analytical
25 reason for that? Or was it an arbitrary decision?

1 MR. MIR: Based on comment from CBPCA
2 and SMUD. The emphasis was to reduce the load on
3 the house first, the external load and the
4 internal load. And then finally, once that load
5 -- and seal the building. And once that load is
6 finally lower, then you would actually replace
7 equipment down to a lower size, and hopefully get
8 some savings on equipment size reduction, as well.

9 And the appropriate, you know, load
10 requirement of that house, that is now hopefully
11 smaller than it was before.

12 MR. CONLON: All right. So it's from a
13 public policy perspective that we want to
14 differentially benefit load reduction measures
15 over other types of energy efficiency measures.
16 Because anybody that's familiar with simulation
17 methodology knows that when you -- that the order
18 of simulation measure analysis has a very
19 significant effect on cost effectiveness.

20 And NREL and others have done studies on
21 how significant that effect can be depending on
22 the interactive effects between measures.

23 And my understanding is that in most of
24 the studies the Commission does of individual
25 measure cost effectiveness, the classic approach

1 is to do a measure-by-measure individual analysis.
2 And to state what the benefit/cost ratio is for a
3 particular measure. And then move on to a second
4 individual measure.

5 And then to combine all those measures
6 together as a package. And then re-simulate to
7 understand what the interactive effects of all
8 cost effective measures would be.

9 If I understand the rolling basecase
10 group approach that's now proposed, it would give
11 significant benefit to the building envelope
12 measures ahead of the priority of some of the
13 other groups.

14 And I just want to be -- I think we
15 should be explicit about that, if that's what
16 we're doing here with our regulations.

17 PRESIDING MEMBER ROSENFELD: Yeah,
18 Rashid, I'm sorry, I was hunting for page numbers
19 instead of slide numbers, so I missed the first
20 time.

21 I am sort of with Mr. Conlon. I mean
22 I've never thought of measures except in sequence
23 of the most cost effective one first. So, I'm
24 sorry, at the risk of being repetitious, how big a
25 change is this and why didn't we stick with the

1 traditional sequence?

2 I'm sorry that I wasn't listening to you
3 the first time.

4 MR. PENNINGTON: Maybe I can help with
5 the response here. This was recommended by two
6 commenters as an improvement. What you often have
7 is you often have a defective envelope. And you
8 often have, particularly for older buildings, you
9 have a lack of insulation. You have --

10 PRESIDING MEMBER ROSENFELD: Or no
11 insulation.

12 MR. PENNINGTON: Or perhaps no
13 insulation. You have quite often a fairly leaky
14 envelope. And so you could focus on those
15 options.

16 And the other thing is that the measures
17 are more continuous. You know, changing levels of
18 insulation as you're increasing them is a
19 relatively continuous thing. Whereas equipment
20 measures can be very lumpy, particularly if you're
21 not close to the end of the useful life of the
22 furnace or air conditioner or whatever.

23 So, basically this is looking at the
24 problem of trying to address the loads of the
25 building, and focus in on the loads first. Try to

1 get the building envelope to be, you know, as --
2 what's the word -- fundamentally in good shape as
3 it's cost effective. Try to get the ducts sealed
4 so that load that the HVAC system sees would be
5 prioritized.

6 And then turn to what are the equipment
7 changes that could be made. And that would be --
8 and at that point you have potentially a symbiotic
9 change there where you can reduce the size of the
10 equipment.

11 If you are purchasing a new furnace, or
12 you are purchasing a new air conditioner, if you
13 reduce the loads first that that system is seeing,
14 then when you change you can not only consider an
15 efficiency upgrade, but also you can downsize the
16 equipment.

17 If you do it the other way around, you
18 tend to not be downsizing the equipment. So you
19 first choice tends to be a full-size unit that you
20 would be making the decision on.

21 PRESIDING MEMBER ROSENFELD: I would
22 think, though, it is not the sort of traditional
23 approach, and I think -- well, maybe we should
24 talk about it offline.

25 MR. CONLON: My sense is that one of the

1 beauties of this particular system is the standard
2 versus custom approach. And my suggestion would
3 be to take a closer look at this, be sure we're
4 really clear about the rationale for making this
5 decision.

6 And there's no reason why we can't give
7 some flexibility in the custom approach to do
8 measured groupings, lumpings, and to do some
9 packaging of savings packages for the contractors
10 who are actually implementing the work.

11 My vote would be in favor of keeping the
12 standard approach fairly standard and fairly
13 transparent with respect to traditional methods of
14 measure-by-measure cost effectiveness analysis.

15 Quickly on some other points. I wanted
16 to support the net zero energy goal scale. I
17 think that continues to be an important innovation
18 in the new program, and I like it. And I also
19 support the increase to 250 as the maximum score.
20 I think it would be more meaningful to people to
21 see their home on the scale as opposed to just off
22 to the left.

23 I also want to support the concept of
24 removing post-retrofit bill analysis and making it
25 mandatory for the building performance contractor

1 retrofit option, at least at this stage of
2 regulation.

3 I think that there's plenty of mandates,
4 new mandates being imposed on the performance
5 contractor community. And we need to be sensitive
6 to how much regulation these new industries can
7 take.

8 Finally, I wanted to ask if any further
9 consideration has been given to just the issue I
10 brought up, I think, at the last hearing regarding
11 rating the whole house including significant loads
12 like pools and wells. If there has been any real
13 attention to trying to include the rating of those
14 measures or those loads in a standard home energy
15 rating.

16 In other words, two houses of identical
17 construction and orientation. One's on a well,
18 one's not. They would currently be given the same
19 rating score.

20 PRESIDING MEMBER ROSENFELD: I'm sorry,
21 I just didn't hear you. Two houses of identical
22 configuration, one's on a --

23 MR. CONLON: One's on a well, the other
24 one's on a city water supply.

25 PRESIDING MEMBER ROSENFELD: Oh, okay.

1 MR. CONLON: And their rating score, as
2 currently proposed, would be identical as I
3 understand it.

4 So the first question has to do with
5 those ancillary loads.

6 And the second issue is has there been
7 any additional thought put into removing the
8 penalty against passive cooling where that is
9 homes that have no air conditioners.

10 In other words, again two identical
11 houses. One has an air conditioner, one without.
12 Currently they would both get the same HERS
13 rating, all other things being equal.

14 PRESIDING MEMBER ROSENFELD: Bruce.

15 MR. MAEDA: There's a couple things
16 mentioned, I forgot one of them, but on the
17 passive cooling situation, I don't really believe
18 there is a penalty for passive cooling. Even
19 though we require a system to be modeled, if a
20 building is truly a passive cooling building, it
21 will have truly a almost zero cooling load, except
22 in a few very small or a very very small one.

23 So, I don't think it's a penalty, but
24 that's another issue.

25 PRESIDING MEMBER ROSENFELD: On this

1 business of the ancillary loads where they're not
2 completely visible, like the well pump which might
3 be a sort of hidden deficit, I can see the
4 argument for not rating it.

5 But it does seem like there should be a
6 listing, at least, of booby traps.

7 MR. PENNINGTON: That's exactly what we
8 propose. What you just said.

9 PRESIDING MEMBER ROSENFELD: So it would
10 be written down that there will be extra expense
11 from the well pump or --

12 MR. PENNINGTON: Right. Right.

13 PRESIDING MEMBER ROSENFELD: Is that
14 okay with you?

15 MR. CONLON: So, the score would be the
16 same, the rating score would be the same, --

17 MR. PENNINGTON: Right.

18 MR. CONLON: -- but there would be on
19 the rating disclosure certificate some mandatory
20 reporting of like an estimated energy penalty for
21 the fact that there's a well? Or a pool? Or is
22 that just a line in text someplace in the report,
23 someplace else in the report?

24 MR. MAEDA: The way it's set up now is
25 there are required recommendations for ancillary

1 loads, but not necessarily an estimate of the
2 penalty. We --

3 PRESIDING MEMBER ROSENFELD: Did you say
4 required recommendations? Did I hear you --

5 MR. MAEDA: There's some canned
6 recommendations that -- you got the swimming pool,
7 for example, we recommend that you have a pool
8 cover if it's heated. We recommend that you use
9 efficient pumping systems, measures for improving
10 your pumping performance on the pool and things of
11 that nature.

12 There are some standard recommendations
13 that are required to be produced if the check the
14 pool as existing. We don't have an estimate of
15 the energy consumption. We could put ones from
16 RASS in. We don't have that required at the
17 moment.

18 MR. CONLON: Perhaps at this stage it's
19 not -- I don't want to over-burden the process or
20 slow it down too much with this issue. But I do
21 think it's important on the main certificate to do
22 some kind of a disclosure there that the house has
23 a well, the house has a pool, the rating does not
24 reflect that.

25 And that's what we've done on our

1 report. And we continue to get feedback from
2 customers that that is a weakness in the HERS
3 rating process. That we should do a better job of
4 making sure that that's part of the energy profile
5 of these two different properties may be compared.

6 Oh, and the air conditioning cooling
7 penalty might be handled the same way, simply by
8 saying the home does not have an air conditioner.
9 It's been modeled as if it did. Something like
10 that could be added perhaps as key footnotes on
11 the certificate that would get that. Until we can
12 have better methodologies for doing this
13 estimation, perhaps we could just note them on the
14 certificate.

15 Thank you very much for the
16 consideration of my comments.

17 PRESIDING MEMBER ROSENFELD: Thank you.

18 MR. MIR: There's the certificate, and
19 then there's the backup to the recommendation, the
20 rating report and part of the rating report
21 already are inputs. So some of this would show up
22 on that inputs, but probably couldn't all fit on
23 the certificate.

24 MR. CONLON: All right.

25 PRESIDING MEMBER ROSENFELD: Bob Scott,

1 Executive Director of CHEERS.

2 MR. SCOTT: Thank you, Commissioners. I
3 can appreciate the hard work that the staff has
4 gone through in preparing this, getting us to this
5 point from, you know, a long time ago when we
6 started on this.

7 I want to comment on three things that I
8 think are pretty important, because over the past
9 months and weeks we've been participating in
10 discussions with staff, other stakeholders,
11 software vendors about implementing things that
12 HERS providers are going to have to implement
13 beginning with 2008 standards.

14 And obviously this regulation is
15 important to that process because this is what we
16 will be authorized under law to be performing as
17 duties.

18 I have three things that I want to bring
19 up. The first one is related to building
20 performance contractors. And I know that this
21 issue has been discussed somewhat.

22 But I think if we look at the regulation
23 and in the technical manual most of the emphasis
24 about building performance contractors is really
25 focused on their responsibility and role as a

1 rater. And so I think it would be really helpful,
2 especially to a provider who would consider having
3 a building performance contractor program, some
4 continued guidance to deal with the little "c"
5 word that's in that definition in the regulation,
6 which is small contractor. And so the issue
7 related to licensing, I think, is very important.

8 One of the items that it suggests is it
9 allows them to be exempt from the independent
10 entities requirement in the regulation. And in
11 the HERS technical manual it says that if it
12 allows them to do work if they are general or
13 specialty contractors.

14 I think right there you can see a
15 conflict if building performance contractors are
16 supposed to be doing a whole-house approach to
17 this, then shouldn't we require, and as a HERS
18 provider, I would like guidance to know that
19 perhaps this means that building performance
20 contractors are actually B or general building
21 contractors.

22 So I think it's an issue. There's more
23 description of the role of building performance
24 contractors as raters versus how we look upon them
25 as contractors. So that's one thing I'd like to

1 bring up on that.

2 In regard to that, the training that
3 building performance contractors have is supposed
4 to be an extension or more in-depth training than
5 that which we require for energy raters.

6 And I guess I would wonder if we
7 provided the same level of training to someone who
8 becomes a California whole house home energy
9 rater, what would be the difference between that
10 training and what the building performance
11 contractor does. So that's just sort of a
12 quandary that I struggle with. We don't want to
13 dumb down our rater training obviously.

14 The other thing that I think that it
15 might provide is we do give guidance and look at
16 what licensing requirements are, and be specific
17 about it, is that I think it opens the opportunity
18 for sharing with CSLB, with enforcement agencies,
19 in trying to deal with this real problem of
20 enforcement --

21 PRESIDING MEMBER ROSENFELD: I'm sorry,
22 what was the --

23 MR. SCOTT: Oh, California State -- the
24 contractors license board.

25 PRESIDING MEMBER ROSENFELD: CSLB.

1 MR. SCOTT: CSLB, pardon me. And I'm
2 just saying that it probably helps open that
3 dialogue because we do know that enforcement
4 certainly is an issue.

5 The third part is that -- or another
6 element to this is that special programs are
7 certified through this. Building performance
8 contractors and I think a higher level of defining
9 what the contractor's side of this is is
10 important.

11 We have another special program that is
12 also authorized through this regulation which is
13 third-party quality control programs. And I think
14 we have seen that there's been a need to increase
15 the scrutiny, increase the definition of these
16 programs.

17 And I would hope that we would really
18 look at releasing another special program; make
19 sure that there are controls; and that we really
20 understand how they're constructed and how they're
21 supposed to operate. Because, again, as a HERS
22 provider, we're supposed to -- we would be
23 expected to put together a program that would
24 operate these types of programs.

25 I'll move on to another issue which has

1 to do with the HERS software.

2 PRESIDING MEMBER ROSENFELD: Hold on,
3 you're --

4 MR. SCOTT: Oh, I'm sorry.

5 PRESIDING MEMBER ROSENFELD: -- going
6 pretty fast --

7 MR. SCOTT: Want me to stop on that one?

8 PRESIDING MEMBER ROSENFELD: -- and I
9 wonder if the staff -- you already got four
10 bullets here, so I --

11 MR. SCOTT: Oh, sorry.

12 PRESIDING MEMBER ROSENFELD: -- wonder
13 if the staff wants to --

14 MR. MIR: Just on contractors, I mean
15 there's existing law on contractors. So, we
16 didn't talk about, you know, -- and this is
17 probably an assumption, you know, they've got to
18 have a driving license, they've got to have
19 contractors license if they're doing work on the
20 house, they've got to have, you know, all the
21 things that a contractor should have now. But we
22 didn't specify all that out.

23 Hopefully, I mean -- hopefully, an
24 unlicensed contractor, an unlicensed person would
25 not be able to become a building performance

1 contractor because they --

2 MR. SCOTT: Hopefully.

3 MR. MIR: Hopefully. I mean, you
4 know, --

5 MR. SCOTT: And I guess that's the
6 problem I see.

7 MR. MIR: -- I mean it's -- I guess it's
8 implied that --

9 MR. SCOTT: Right. However, but if you
10 consider that in --

11 MR. MIR: I mean there are entities that
12 enforce that.

13 PRESIDING MEMBER ROSENFELD: I'm sorry,
14 Rashid, say that again?

15 MR. MIR: There are entities that
16 enforce that.

17 PRESIDING MEMBER ROSENFELD: Oh,
18 okay, --

19 MR. MIR: You know.

20 PRESIDING MEMBER ROSENFELD: Now usually
21 I would think if I hired a contractor and if his
22 business cards gives his contractor number I would
23 assume he's --

24 MR. PENNINGTON: I think the key point
25 that Robert's making is beyond that. I think that

1 he's saying that we shouldn't allow specialty
2 contractors to be a building performance
3 contractor. It should only be allowed for general
4 contractors, and the licensing category of general
5 contractors.

6 PRESIDING MEMBER ROSENFELD: Oh, okay, I
7 think I wasn't listening hard. I'm sorry, can you
8 explain to me the difference between a specialty
9 contractor and a licensed general contractor? I'm
10 sorry, I didn't get it.

11 MR. PENNINGTON: Well, a specialty
12 contractor is generally one trade. They're a
13 mechanical contractor, or a --

14 PRESIDING MEMBER ROSENFELD: Or
15 electrical, or --

16 MR. PENNINGTON: -- some, you know, a
17 plumbing contractor or whatever. Whereas a
18 general contractor is authorized to supervise the
19 work of other contractors. A builder is an
20 example of a general contractor. There are also
21 general contractors that work in the remodeling
22 industry to supervise the work of other
23 contractors.

24 So Robert's suggesting that perhaps
25 these regulations disallow specialty contractors

1 from being considered a building performance
2 contractor.

3 PRESIDING MEMBER ROSENFELD: Oh, okay,
4 thanks for straightening me out. Now, do you have
5 a response to that? Now that I understand the
6 issue.

7 MR. PENNINGTON: Well, I think that
8 potentially limits the field dramatically. And
9 potentially disallows some competent specialty
10 contractors from performing this work.

11 ASSOCIATE MEMBER PFANNENSTIEL: I'm
12 sorry, the regs do not --

13 MR. PENNINGTON: The regs do not mention
14 this now.

15 ASSOCIATE MEMBER PFANNENSTIEL: Okay.
16 So they don't narrow it down.

17 MR. PENNINGTON: But Robert's suggestion
18 potentially substantially reduces the field.

19 MR. SCOTT: I think that it's important
20 to try and identify something so there is guidance
21 to know what little "c" contractor means in that
22 definition. And that's my only point.

23 And I say that if you go and look at
24 this exception that you have written in the
25 technical manual, it does say right there on page

1 62 about how the contractor serves as either a
2 general contractor or specialty contractor.

3 And there may be conflict in that very
4 statement if you have a specialty contractor that
5 is supposed to be doing a whole house approach.

6 MR. HUNGERFORD: Is your concern that a
7 specialty contractor would not really have the
8 ability to do a whole house approach in his
9 rating? Or that there would be some sort of bias
10 introduced where an HVAC contractor would
11 recommend an HVAC solution and an insulation
12 contractor would recommend an insulation solution,
13 and that sort of thing?

14 MR. SCOTT: No, no, I'm concerned with,
15 as a provider, training these people and
16 certifying them to do work under this regulation
17 if they do not have the proper licensing that they
18 can -- and they are a rater, I just want to have
19 someone tell me, let me know what are the
20 authorized, what are the appropriate
21 certifications or classifications for that
22 individual.

23 So we have guidance -- well, I sent them
24 out there to do this. Or we authorize them to be
25 out there to do this.

1 I'm just saying, to me it seems to need
2 some clarity to that, because I don't think that
3 C-20s can necessarily subcontract for insulation
4 or other kinds of measures.

5 MR. HUNGERFORD: So it's -- you're
6 concerned about potential competence issues rather
7 than bias issues?

8 MR. SCOTT: I'm concerned about
9 competence and liability issues potentially to us,
10 having certified not a general licensed contractor
11 doing whole house under a specialty license that,
12 by rights, they can't be doing.

13 And I'm just saying that there seems to
14 be a conflict in how this states that as being
15 allowed here.

16 MR. HUNGERFORD: I guess I'm confused.
17 Because if a performance contractor is only
18 licensed as an insulation contractor, and he
19 does -- he's certified, he knows how to do the
20 ratings, and he does that. That you're concerned
21 that he would -- that the customer might be
22 confused and allow that contractor to go ahead and
23 do an HVAC upgrade, as well?

24 MR. SCOTT: Well, I think that --

25 MR. HUNGERFORD: Only not do it properly

1 because he's not licensed as an HVAC
2 subcontractor?

3 MR. SCOTT: No, he'd be a general, he
4 could subcontract to a specialty license.

5 MR. HUNGERFORD: If he's a -- your
6 concern is about the contractor, the narrow
7 contractors rather than the general contractor,
8 right?

9 PRESIDING MEMBER ROSENFELD: Yeah.

10 MR. SCOTT: Correct.

11 MR. PENNINGTON: So Robert's also
12 wondering if there's some licensing restriction
13 against specialty contractors performing the
14 duties that you would expect a HERS rater to do,
15 or a building performance contractor to do.

16 And that's something we could
17 investigate. I hadn't heard that there was that
18 restriction, but we could investigate that.

19 PRESIDING MEMBER ROSENFELD: One would
20 sort of think that in principle even a specialty
21 contractor could be sufficiently trained to do
22 HERS ratings.

23 MR. PENNINGTON: One would think.

24 PRESIDING MEMBER ROSENFELD: Bruce.

25 MR. MAEDA: I would suspect -- Bruce

1 Maeda, Energy Commission Staff -- I would suspect
2 that even though they may have a specialty
3 contract and they're acting as a performance
4 contractor, they would essentially do it using the
5 homeowner as a general contractor, which the
6 homeowner is always allowed to do. So, --

7 PRESIDING MEMBER ROSENFELD: I'm sorry,
8 your voice faded. Just say the last --

9 MR. MAEDA: The homeowner can actually
10 act and hire subcontractors, and under the
11 recommendation of the specialty contractor who
12 might be acting as a building performance
13 contractor. It's not the same in commercial
14 buildings, but for residential buildings the
15 homeowner can essentially take the place of -- or
16 take the responsibility for certain kinds of
17 activities.

18 MR. SCOTT: So, I guess so. Is there
19 some clarification to how that rule would be --
20 how you would tell homeowners you can be the
21 general contractor for this project?

22 I just think there's some complications
23 that I see here that I'm really not sure about.
24 And it certainly makes it clearer by specifying
25 the licensing requirement and classification.

1 MR. PENNINGTON: I think we understand
2 his comment.

3 PRESIDING MEMBER ROSENFELD: Oh, okay.
4 You know, I'm sorry, I cut you off because you had
5 already raised about five questions and you
6 weren't through.

7 MR. SCOTT: Sorry, I was -- my time's
8 up? Okay, I'll go.

9 (Laughter.)

10 MS. LAM: There is no time limit.

11 MR. SCOTT: I do have two other ones,
12 and I'll be -- these are fairly quick. And I
13 think that they really can be handled fairly
14 easily.

15 One has to do with HERS software. In
16 the technical manual those details do suggest you
17 could have software developed independently from a
18 HERS provider's application. And I would just
19 like to see if there's some way to make that
20 specific in the regulation, as well, so that they
21 are working in conjunction with each other.

22 I already see that the requirement for
23 having HERS software developed as it has to be in
24 ACM, implemented, developed, tested so it can be
25 released in the marketplace in a very short

1 timeframe. I think it's going to be certainly a
2 significant challenge.

3 And I think that if we create this
4 opportunity within the regulation to split those
5 out more specifically, then I think that would be
6 a benefit. Point taken.

7 Okay. One final one here has to do with
8 measure cost database. Again, drawing on the
9 experience that we currently have ongoing with
10 trying to respond to or being -- preparing to
11 respond to the implementation of the Title 24 2008
12 standards, we've been discussing standardization
13 of information so we're all kind of working from
14 the same page.

15 And again, I would say that the measure
16 cost database is really not very specific. We
17 should be more specific. We should essentially
18 try to develop some public domain standard so that
19 we all are working off the same page, especially
20 when it comes to measure costs, because measure
21 cost is a fairly important attribute of cost
22 effectiveness.

23 And I would recommend that the Energy
24 Commission should try to, you know, to coordinate
25 a collaborative among various stakeholder so we

1 could develop these standards. And therefore be
2 working from the same page. And develop the cost
3 measure database that would be worthwhile for a
4 state -- would have some strength as a statewide
5 program, or a statewide tool.

6 PRESIDING MEMBER ROSENFELD: What is
7 there in the way of a database now? Bruce, are
8 you going to tell us? Or Bill?

9 MR. MAEDA: Bruce Maeda, Energy
10 Commission Staff. The way it was structured in
11 the regs and in the technical manual is the DERE
12 database would be the starting point. And we do
13 have a collaborative already written into the -- I
14 don't know if it's in the technical manual or
15 the -- I think it's in the technical manual.

16 We have a collaborative approach where
17 the Energy Commission would referee amongst the
18 providers to update that -- yeah, right, update
19 that database at least on an annual basis.

20 So the structure is there. The details
21 are --

22 MR. SCOTT: Yeah. My point is that I
23 think we ought to embark on this in fairly short
24 order.

25 PRESIDING MEMBER ROSENFELD: Okay. But

1 we seem to have agreement that collaboration is
2 necessary.

3 MR. MAEDA: Sure.

4 PRESIDING MEMBER ROSENFELD: That's it?

5 MR. SCOTT: That's all I have.

6 PRESIDING MEMBER ROSENFELD: Thank you
7 very much.

8 Mike Hodgson, you seem to be next.

9 MR. HODGSON: Thank you, Commissioners
10 and staff. Speaking on behalf of ConSol, but I
11 would like to put in a comment for CBIA, even
12 though I did not put in a card for Bob Raymer, who
13 is attending another workshop, and wanted to
14 express his strong support and urge early
15 conclusion of the HERS rulemaking phase II.

16 Speaking for Consol, I have actually
17 similar comments in which very supportive of the
18 CEC in this HERS rulemaking. Would compliment
19 staff on their thorough analysis. And I would
20 also compliment staff on listening to us in May
21 and making some changes.

22 The biggest change on the rating scale,
23 I think, is a vast improvement. It's broadened.
24 I have some questions about that and I still think
25 the variation between TDV and what the rest of the

1 world is using is significant. DOE is using site,
2 RESNET is using, it's hard to describe but it's a
3 modified something load. And I won't go there.

4 But I think that's an ongoing
5 conversation. And the more uniformity we could
6 have the better this process would work in the
7 state.

8 But it begs some questions that I would
9 like, I think, mostly clarification on. The first
10 is in looking at Rashid's slides, number 22, you
11 were looking at how utility costs are calculated.
12 And then kind of aggregating costs for not only
13 the building, but also other features.

14 And I was just curious on that
15 aggregation is whether you're using totally TDV
16 work or TDV and site, or how do you aggregate
17 those costs?

18 MR. MIR: On slide 22?

19 MR. HODGSON: I believe it was on 22.
20 You're talking, for example, heating, cooling,
21 water heating, we understand how Title 24 works.
22 Then you're going out to using a lighting model
23 that's referenced in the manual, and it says use
24 XYZ.

25 Is that also on TDV or is that on site?

1 MR. MIR: This slide is from the RASS
2 report. The energy use would be based on TDV.

3 MR. HODGSON: Okay.

4 MR. MIR: For lighting appliances,
5 heating, cooling and water heating.

6 MR. PENNINGTON: For the rating.

7 MR. HODGSON: For the rating.

8 MR. MIR: For the rating.

9 PRESIDING MEMBER ROSENFELD: So
10 there's --

11 MR. PENNINGTON: And the information
12 about the kilowatt hours and therms would be
13 provided, as well.

14 MR. HODGSON: And that would be on site?

15 MR. PENNINGTON: And that would be --

16 MR. HODGSON: Excuse me, on --

17 MR. PENNINGTON: -- site energy.

18 MR. HODGSON: -- site or source. Okay.
19 Good. So you're going to get both, the rating on
20 TDV and then actual predicted use that would
21 optimistically match the utility bill.

22 MR. PENNINGTON: Correct.

23 MR. HODGSON: Okay.

24 PRESIDING MEMBER ROSENFELD: Mike, I'm a
25 little puzzled here. The pie weighted by TDV.

1 MR. MIR: The pie is electricity from a
2 sample report from RASS.

3 PRESIDING MEMBER ROSENFELD: In kilowatt
4 hours.

5 MR. MIR: In kilowatt hours.

6 PRESIDING MEMBER ROSENFELD: See, I'm
7 puzzled. There are three units that I can
8 visualize. One is kilowatt hours, --

9 MR. HODGSON: Right.

10 PRESIDING MEMBER ROSENFELD: -- I know
11 what that is on the meter, and I know what therms
12 is.

13 MR. HODGSON: Um-hum.

14 PRESIDING MEMBER ROSENFELD: And then I
15 know what TDV is. I don't know, you're using the
16 word site, does that just mean kilowatt hours to
17 you?

18 MR. HODGSON: Source means kilowatt
19 hours to me, or site, either one, depending upon
20 how you're translating it. But, yes, that would
21 be kilowatt hours. And TDV is not --

22 PRESIDING MEMBER ROSENFELD: If you
23 could just make your remark in kilowatt hours I
24 wouldn't be so --

25 MR. HODGSON: Okay.

1 PRESIDING MEMBER ROSENFELD: --

2 confused.

3 MR. HODGSON: My question, Commissioner,
4 was they have a series of aggregations of loads or
5 energy uses, I should say. Some of them, by Title
6 24, are currently calculated by TDV.

7 PRESIDING MEMBER ROSENFELD: Right.

8 MR. HODGSON: This slide is implying --
9 not implying, stating that we're going to go out
10 and get other appliances loads and have into the
11 rating, which is a great idea.

12 PRESIDING MEMBER ROSENFELD: Like
13 lighting.

14 MR. HODGSON: I'm wondering how do those
15 marry. Are some of them TDVs and some of them
16 kWh? And I think the response is the rating,
17 which I'm not sure how you translate plug load in
18 TDV terms, so that means you assume an hourly time
19 of use for that plug load --

20 PRESIDING MEMBER ROSENFELD: It's in the
21 schedule.

22 MR. HODGSON: -- there is a schedule.
23 Then that would translate the rating in TDV. But
24 the consumer, trying to figure out what my energy
25 bill is that I pay to --

1 PRESIDING MEMBER ROSENFELD: Needs
2 kilowatt hours and therms.

3 MR. HODGSON: Correct. I'm just trying
4 to --

5 MR. MIR: The rated would be based on
6 TDV, the utility bill analysis would be kilowatt
7 hours, therms, and the recommendations would be
8 kilowatt hours therms in dollars.

9 MR. HODGSON: Great. And then --

10 PRESIDING MEMBER ROSENFELD: Okay, I
11 think we dodged that bullet then.

12 MR. HODGSON: This is not a bullet, it's
13 a question. Information.

14 (Laughter.)

15 MR. HODGSON: Bullets come later.

16 Then --

17 MR. HUNGERFORD: Up here questions are
18 bullets.

19 MR. HODGSON: I'm sorry?

20 PRESIDING MEMBER ROSENFELD: Forget that
21 bad joke.

22 (Laughter.)

23 MR. HODGSON: The greenhouse gas
24 emissions that are actually quoted, and I'm not
25 sure where they show up on the certificate,

1 because my glasses don't read that small, or I
2 don't see that well, but is that also on TDV or is
3 that on kWh and therms?

4 MR. MIR: In the 2008 there's a, I
5 believe it's -- is it E-squared or E-cubed?

6 PRESIDING MEMBER ROSENFELD: Can't hear
7 you.

8 MR. PENNINGTON: E3.

9 MR. MIR: E3. They have a stream for
10 kWh, the amount of carbon emissions that would be
11 for each hour of the year. So, based on the
12 schedule, and that's posted on the Title 24
13 website, as --

14 MR. HODGSON: Okay, so you're --

15 MR. MIR: -- as one of --

16 MR. HODGSON: -- using 2008 Title 24
17 predictions for greenhouse gas.

18 MR. MIR: Numbers that would go into
19 that.

20 MR. HODGSON: Great. Okay, thanks.

21 On the certificates, which were your
22 slide 11 and 14, the question I have is I think
23 certificates are great, I like colors, I like
24 rating scales, good for consumer.

25 But are you anticipating that this is

1 going to be kind of a format that we must use or
2 content that we use?

3 So if I want to produce a certificate,
4 do I have to use this style of certificate with
5 whatever is on there, or can I use the content on
6 there and put it in a different certificate?

7 MR. PENNINGTON: I don't remember
8 exactly what the HTM says on this. We're trying
9 to provide a consistent look across different
10 providers. But not lock in an absolute, you know,
11 must be these colors, you know, all of that.

12 So, actually --

13 MR. HODGSON: The reason I ask, Bill, is
14 that some of us have gone to the trouble of
15 getting our certificates actually approved in
16 energy efficient mortgage products through Fannie
17 and Freddie underwriting guidelines and through
18 federally insured mortgage underwriting
19 guidelines.

20 If we now have to use a different
21 certificate we now have to go through that
22 approval process again. And now we may be
23 requiring on a retrofit, rather than a new home,
24 two certificates, one of which is already approved
25 and one that now someone has to have the

1 horsepower to get the underwriters to actually
2 acknowledge, the appraisal people to acknowledge.
3 And I'll tell you that is not a short process.

4 So if we can take content and put
5 content into a preapproved certificate we could
6 speed the application. If we have to use the
7 actual format, then I hope you're taking the
8 initiative to go contact those agencies that
9 actually may be using this certificate for lending
10 approvals, and telling us how you're doing that,
11 when you're doing that, and when we can use the
12 certificate.

13 MR. PENNINGTON: So, relating to the
14 latter, we were going to take you up on your offer
15 you made at the last public meeting to --

16 MR. HODGSON: I don't recall any offer
17 at the last meeting.

18 (Laughter.)

19 MR. PENNINGTON: -- to assist in
20 discussing these recommendations with the lending
21 community.

22 MR. HODGSON: That's fine, we'll be
23 happy to do that, Bill. My offer actually does
24 still stand. But the issue is the underwriting
25 guidelines right now, as we probably would

1 presume, are getting a little bit more difficult,
2 and they're getting much more regulated than we've
3 had in the last 30-60 days, regardless of the last
4 six to 12 months.

5 And so approvals of this are getting
6 very very complicated. And that's why we think if
7 we can use content and not format we would have a
8 better chance of moving this forward in a quicker
9 path.

10 PRESIDING MEMBER ROSENFELD: Well, your
11 scale, Mike, does have zero to 250?

12 MR. HODGSON: We don't have a scale,
13 Commissioner.

14 PRESIDING MEMBER ROSENFELD: You just
15 don't have a scale?

16 MR. HODGSON: No. But what we would do
17 is, for example, we have a comfortwise certificate
18 approved by Freddie and Fannie in underwriting
19 guidelines. That's currently in the new
20 construction market.

21 What we could use is something similar
22 to that certificate and add it into the existing
23 market and add a scale.

24 What the underwriter is interested in is
25 how did you generate energy savings? By what

1 predicting model did you use? They have their own
2 models, and you have to match up to their models.

3 And that's the question, is if you've
4 already documented how you match up to their
5 models, you're good to go. If you haven't, then
6 you have to go through their process, which is
7 about a couple-year process, assuming they're not
8 busy. And right now they're a little preoccupied
9 to actually match their model.

10 So, my intent here is we want to move
11 this into the market as fast as we can, as
12 reasonably. And so either you're anticipating
13 that and we use your format and you have their
14 approval. Or we use a format that allows us to go
15 with preexisting approvals on energy savings.

16 PRESIDING MEMBER ROSENFELD: And the
17 complication could be that we accept your offer,
18 use your format for a couple of years, and
19 meanwhile apply for some general format --

20 MR. HODGSON: Well, I'm not sure what
21 the offer is, Commissioner, but the offer is to
22 help you work with the underwriters, that's
23 sincere and we'll be happy to do that.

24 PRESIDING MEMBER ROSENFELD: Yeah, I
25 would say that's valued and necessary, yes.

1 MR. HODGSON: Right, but the implication
2 is if you already have a certificate in the market
3 that's accepted by the mortgage and underwriting
4 and appraisal industry, it's difficult right now
5 to change that.

6 You can change content, but basically
7 where things are on the certificate, like what's
8 the energy savings, what features are being
9 installed, those are things that they have to
10 record in other places in underwriting guidelines.

11 So, I would anticipate that we want to
12 leave those things alone. Is there room for a
13 scale? Absolutely. We could put a scale
14 somewhere on the certificate. Is there room for
15 some of the content there? Probably.

16 It's a very busy certificate already,
17 but we can make room. Does it have to be on 8.5-
18 by-11? Yes. So I mean there's some things that
19 we just have to squish into something that would
20 be appropriate.

21 And we'd be happy to work with you, but
22 this is a process that takes a long time to work
23 through.

24 PRESIDING MEMBER ROSENFELD: You're very
25 convincing and --

1 MR. PENNINGTON: So I found the pages in
2 the HTM that talk about this, pages 9 through 11.
3 The expectation is that the RETI scale be used as
4 specified. And that there be a standard
5 California Energy Commission logo on it. And that
6 specific information be provided on the
7 certificate.

8 MR. HODGSON: Okay. So it sounds like
9 content and not format.

10 MR. PENNINGTON: Right.

11 MR. HODGSON: Okay, good. Thank you.

12 On slide 27, which was, I believe, a
13 previous speaker's comments, which is the rolling
14 basecase standard method -- this is an interesting
15 approach and I'm sorry I didn't catch this until I
16 came to the meeting today -- in which the analysis
17 is done kind of sequentially for building
18 envelope, system design, et cetera.

19 Other speakers have noted how, you know,
20 this really is not traditional Title 24 cost
21 effectiveness approach. And I think we need a
22 little bit of time to understand what's the right
23 way to go. I don't want to say what's right, but
24 what's the best approach on the HERS rating.

25 But my impression is let's say that we

1 go with 1, 2, 3 and 4, as listed here. Or we even
2 do, you know, anything goes, whatever is most cost
3 effective.

4 The consumer still has a choice of
5 whatever they want to do. This is just a
6 suggestion, this is not a requirement. So I just
7 want to make sure that I understand that even
8 though this change has been made, it's just that
9 if you don't put in R-38 ceiling insulation you
10 don't get to do the rest of the stuff that's
11 recommended.

12 And I don't think that's true. I think
13 the intent is whatever the consumer wants to do
14 and can be convinced to do, they do. This is just
15 an unbiased approach theoretically to how we do
16 this.

17 PRESIDING MEMBER ROSENFELD: Sure, I
18 understand that. Although, just to repeat my
19 earlier hesitation, I'm not convinced yet that
20 this slide 27 approach is the best one.

21 But surely, he who pays the piper calls
22 the tune.

23 MR. HODGSON: Okay. Last comment, and
24 it's really just kind of a caution to staff. And
25 that is we've been working on energy potential

1 savings in the retrofit market with Air Resources
2 Board and other state agencies in trying to
3 predict potential issues with greenhouse gas
4 reductions.

5 And one of the -- probably some of the
6 major studies out there that have been done by the
7 utilities have used the DERE database to predict
8 energy savings. And they get, in my opinion, some
9 odd results. And we've tried to dissect them.
10 And dissecting the DERE database is quite a
11 painful process.

12 And I'll just tell you that we have
13 found in some instances, for example in
14 insulation, about 30 percent of the datapoints are
15 missing. And when they're missing they go to
16 zero.

17 PRESIDING MEMBER ROSENFELD: Yeah, yeah.

18 MR. HODGSON: And if you're not paying
19 attention, then all of a sudden energy savings for
20 putting R-38 ceiling insulation in Riverside is
21 zero kWh.

22 And people haven't figured that out,
23 which is really alarming. And so I think we have
24 a lot of work to do if we do use the DERE
25 database. Someone needs to pay attention to not

1 only cost, which is what we want to use it for,
2 but also energy savings if you want to use it
3 for -- and my preference would be to use Title 24
4 energy savings, but you know, we can talk about
5 that.

6 But it really is a arduous process to
7 dissect that database. And it's alarming to find
8 significant data missing.

9 MR. PENNINGTON: So just a comment. The
10 energy savings estimates come from the tool. And
11 how the tool calculates.

12 MR. HODGSON: Which is great. I'm
13 concerned that what we have found on the energy
14 side may be also true on the cost side. And we
15 just have to be careful when using that data.

16 MR. PENNINGTON: And that was the major
17 reason for us to say that the DERE database would
18 be a starting point for cost databases. And that
19 it would get scrutinized and improved.

20 MR. HODGSON: Thank you.

21 PRESIDING MEMBER ROSENFELD: Thank you,
22 Mike Hodgson.

23 Bruce Cenicerros. Good morning, welcome.

24 MR. CENICEROS: Good morning,
25 Commissioner Rosenfeld, Commissioner Pfannenstiel.

1 PRESIDING MEMBER ROSENFELD: Can't hear
2 a word, Bruce.

3 MR. CENICEROS: Sorry, I'll talk more
4 into the mike here. First, Bruce Cenicerros
5 representing SMUD. And first off I'd like to
6 offer my compliments to the staff for coming a
7 long ways here in developing a very solid product
8 here.

9 You know, Bill, Helen, Bruce, Rashid,
10 everybody's put a lot of hard work on this, and it
11 really shows in the result we have right now. And
12 you did a great job of listening to, and
13 incorporating, some excellent feedback from all
14 the stakeholders, who I also want to express my
15 appreciation for, for sticking through this
16 process and giving a lot of attention.

17 The document we have today is -- the
18 documents are much improved over what we started
19 with. And as we at SMUD are looking at
20 conceptualizing programs to support the home
21 energy rating system for existing homes, and doing
22 something at time of sale, we really are beginning
23 to appreciate how solid of a foundation this will
24 provide to us to build those programs.

25 Since there have been a lot of questions

1 about the slide here, the rolling basecase and
2 this progressive analysis by groups of measures, I
3 want to say just a little bit more. Although Bill
4 did a great job, I think, explaining the rationale
5 behind this.

6 Really, if you think intuitively this
7 makes a lot of sense. For the same reasons we
8 recommend that people, before they go and trade in
9 their car for a more efficient car, they take the
10 200 pounds of stuff out of the trunk and inflate
11 the tires properly.

12 You want to look at what's causing the
13 need to heat and cool your home first. And then
14 you look at how to do it most efficiently. And
15 you go backwards from, you know, addressing the
16 direct heating and cooling loads in the home, how
17 the heat moves into and out of the home. And then
18 the distribution system.

19 So you make sure it's done efficiently.
20 And then you look at well, how efficient -- well,
21 first of all, what size should the equipment be
22 and how efficient should it be.

23 Tom Conlon was absolutely --

24 PRESIDING MEMBER ROSENFELD: Bruce, --

25 MR. CENICEROS: Yes.

1 PRESIDING MEMBER ROSENFELD: -- I find
2 that unconvincing.

3 MR. CENICEROS: Well, I'll explain a
4 little more here with some examples.

5 PRESIDING MEMBER ROSENFELD: All right,
6 I'll listen.

7 MR. CENICEROS: Yes, so Tom Conlon was
8 absolutely right in that the order that you
9 analyze these things can completely change your
10 decisions in terms of what you would do if you
11 first determined that a certain measure A is cost
12 effective, and then you put that into your
13 basecase. That changes the equation for
14 everything you evaluate after that.

15 So, for example here, if you -- I'll
16 give you the example of my home. It was done as a
17 package. I had a home performance contractor come
18 out and recommend a package. It included a Freus.
19 They did not have the analytical tools to go
20 through and do this kind of incremental approach
21 that we've described here.

22 But, when I did that in my own
23 spreadsheet and started with the measures first
24 that affected the envelope, and then said, okay,
25 here's the new energy use after you do this cost

1 effective measure. And it goes down by a certain
2 percentage.

3 And then here's another incremental
4 improvement in efficiency. That decreases the
5 pool available of savings, because the energy use
6 is now less after each of those measures.

7 By the time I did the efficiency of the
8 air conditioner last, the Freus unit had a payback
9 of 30 years. Okay. It didn't look that way on
10 paper when you looked at the Freus by itself if
11 you looked at that first. The payback was less
12 than half that.

13 We got the cooling demand down in the
14 house by 40 percent. Then look at the merits of
15 increasing the efficiency of the air conditioner
16 that much. And then the payback was 30 years.

17 I still did it because I'm an efficiency
18 geek and I think electricity prices are going to
19 go up a lot over the time I have that unit. But,
20 I would not recommend it. I would not have
21 recommended it to the average homeowner. They
22 would have been better off going with a federal
23 standard 13 SEER air conditioner, or maybe a 15
24 SEER, 12.5 EER air conditioner, saving several
25 thousand dollars that could have been put instead

1 towards the insulation.

2 So, the other problem this creates, too,
3 is if you start with the equipment first, and that
4 is the traditional approach, that's why we have so
5 many homes that still have bigger heating and
6 cooling loads than they need to, because the
7 standard contractors that just look at the
8 equipment, they'll go and they'll put in an
9 efficient air conditioner when the homeowner says
10 I want to be efficient. But you're just then very
11 efficiently cooling the attic with the 20 percent
12 to 25 percent of duct leakage that they may still
13 have. Although hopefully they took a permit out
14 and they've sealed the ducts now. But we know
15 that doesn't happen very often.

16 And they're still cooling a home that
17 maybe could have only 70 percent or 80 percent as
18 much heat gain because of improvements that have
19 not have been made in fixing the thermal bypasses
20 and topping off the insulation in the attic and
21 things like that.

22 Once that decision has been made and the
23 equipment's changed out, then it decreases the
24 cost effectiveness of ever doing those envelope
25 measures later.

1 So, I think this is actually more
2 important for contractors who aren't home
3 performance contractors, because they generally do
4 follow this kind of approach logically in their
5 minds, but they don't do it in an analytical tool
6 in all cases.

7 When that C-20 contractor comes out
8 there and makes recommendations on the replacement
9 of the equipment and what efficiency it should be,
10 that the homeowner has been presented with a
11 package of measures that has been analyzed in this
12 sequential manner, so that they can see all the
13 cost effective building envelope measures, here
14 they are. And then the distribution system. And
15 then the equipment last.

16 So, it just makes intuitive sense that
17 you don't want to drive your car around with 200
18 pounds of stuff in the trunk if that's an easy
19 thing to fix.

20 PRESIDING MEMBER ROSENFELD: But, you're
21 just picking a nice example. Of course I don't
22 want to drive my car around with 200 pounds worth
23 of dead load in the trunk. But --

24 MR. PENNINGTON: There's another
25 argument that I would like to present to you. One

1 of the problems with older homes is that the
2 building envelope is defective in terms of thermal
3 bypasses. And so you get very uneven comfort
4 within this building envelope.

5 And wherever the flaws show up in the
6 building envelope you get points of comfort
7 issues. The radiant temperatures vary
8 substantially that the walls are giving off.

9 And so you're getting losses from body
10 heat to the cold surfaces that if you didn't have
11 that, it would be much easier to condition the
12 building.

13 And what often happens with these
14 defects and with these kind of out-of-control
15 radiant temperatures on the surfaces of the
16 envelope, the homeowner compensates by jacking up
17 the thermostat in the heating mode to overcome
18 that comfort problem.

19 And if you fix the building envelope's
20 comfort issues first, then maintaining comfort
21 throughout the house.

22 And another, you know, example of a
23 problem is related to duct sealing. If you put in
24 the very high efficiency air conditioner/furnace
25 and you haven't sealed the ducts first, you've

1 made a major mistake. And you're just wasting the
2 benefit of that system.

3 So, in the scheme --

4 PRESIDING MEMBER ROSENFELD: But, Bill,
5 let's take that as an example. I'm used to
6 dealing with a computer program where you can, if
7 the total of these things adds up to, you know, 20
8 items or something, you can look at the cost
9 effectiveness of each item first and find the --
10 the first one, and take the most cost effective
11 first.

12 You would discover then the duct sealing
13 was very very cost effective and would come in
14 early in the game. I think your --

15 MR. PENNINGTON: Not necessarily. And
16 you don't pick up the --

17 PRESIDING MEMBER ROSENFELD: The non --

18 MR. PENNINGTON: -- the symbiotic --

19 PRESIDING MEMBER ROSENFELD: -- any
20 benefits, that's a very good point.

21 MR. PENNINGTON: -- interactive effects.

22 MR. CENICEROS: My understanding is that
23 the previous case was essentially allowing for a
24 random analysis of the measures. And whatever it
25 happened to hit first that was cost effective

1 would then go into the basecase, is that correct?

2 MR. PENNINGTON: What was most cost
3 effective.

4 MR. CENICEROS: Yeah, it was what was
5 most cost effective. So you'd analyze them all
6 first --

7 MR. PENNINGTON: Right.

8 PRESIDING MEMBER ROSENFELD: Yeah.

9 MR. CENICEROS: -- and go through a
10 whole iteration. The most cost effective thing
11 would then go into the basecase, and then you'd
12 re-analyze the cost effectiveness of all the
13 remaining measures, and then put that into the
14 basecase, the most cost effective.

15 So, that sounds good from an engineer's
16 perspective -- I'm an engineer, I can say that --
17 but it does not accommodate all these issues in
18 terms of the hierarchy.

19 And really, since our goal is to
20 recommend all of the cost effective measures to
21 the homeowner, why do we care that we did the
22 analysis with the first one first, the most cost
23 effective first, when it may make more sense, and
24 I believe very strongly it does make more sense,
25 to look at all the measures that are cost

1 effective, starting from the most to the least,
2 within category one of building envelope before
3 you move on to the next category.

4 Because the other problem we have
5 throughout California is air conditioners and
6 furnaces, both, are tremendously oversized, and
7 are the number one, probably one of the top
8 drivers of discomfort in homes and over-use of
9 energy.

10 And when an air conditioner doesn't
11 reach full efficiency on its performance curve,
12 until what 15, 20 minutes of operation, and
13 they're cycling off after ten most of the time,
14 then we're never getting the nominal efficiency
15 that we think we are anyway, if we're going to go
16 and do that as measure one, you know, upgrade to a
17 15 SEER air conditioner.

18 It becomes a subordinate priority to all
19 these other things that will give your a much much
20 better result in the end. And you would get a
21 different package going with this approach than
22 you would if you did it by order of most cost
23 effective to least cost effective, as before.

24 MR. PENNINGTON: So reinforce one idea
25 here. This is proposed as the standard approach.

1 This is proposed to be done for each house. It's
2 provided as information. This is what you get if
3 you do the approach this way.

4 There's also an expectation that custom
5 approaches will be done where homeowners can
6 choose their measures that they wish, or whatever
7 the motivation is for looking at alternative
8 measures.

9 And there isn't any mandate on what the
10 homeowner ultimately chooses. So this is just
11 providing information consistently through this
12 approach.

13 PRESIDING MEMBER ROSENFELD: I guess we
14 should do this offline. I'm still -- I mean the
15 one thing you did get across to me is that there
16 are not energy benefits, there's sitting next to a
17 drafty single-glazed window is uncomfortable, I
18 accept that. And that isn't taken care of
19 properly by the computer programs.

20 Maybe you make two runs, maybe you do
21 the traditional approach of at least for the
22 custom-rating, maybe you do the traditional
23 approach and show that to the homeowner. And you
24 also do the envelope first approach.

25 I realize that's work, extra, although I

1 don't know that -- the computer programs run
2 pretty fast. So, Bruce.

3 MR. MAEDA: I want to point out you're
4 probably making an awful lot of runs no matter
5 which way you do it. And you're doubling them if
6 you --

7 PRESIDING MEMBER ROSENFELD: Yeah, I
8 realize that. Well, we seem to have a hot issue
9 here. Okay, Bruce.

10 MR. CENICEROS: So I'll just conclude by
11 reiterating SMUD's support for this particular
12 change, which I think is the most valuable change
13 we've made in the last six months as we've been
14 going through this proceeding. And will add a lot
15 of value to this as a tool and recommendations to
16 the homeowner that will give them the best result.

17 But I did want to ask one question on
18 the scale, which I think you really got right at
19 this stage in the way it's presented. But, having
20 it terminate at 250 on the left end of the scale,
21 did you get a chance, or did you identify any data
22 that gave you some sense of what percentage of
23 homes would be above a 250?

24 MR. PENNINGTON: We don't know that with
25 certainty. We've had an estimate using a research

1 version, I guess actually using the 2005 standards
2 tool is what we used.

3 And we saw a clumping of homes around
4 200. I think George Nesbitt reported something
5 similar. But we don't have the new tool, you
6 know. The new tool is coming. So there
7 undoubtedly will be homes that score worse than
8 250.

9 MR. CENICEROS: And as we've commented
10 before, we think it's good for the worst of the
11 worst to show off the scale so they can see, wow,
12 they've got to at least get back on the scale.
13 And so that's a good message to send, as long as
14 it's not like 25 percent or more of the homes,
15 which it doesn't sound like it is here.

16 And with regards to an earlier comment
17 on this may be putting too many people in the
18 middle who still have arguably room for
19 improvement, I'm surmising that the average score
20 for existing homes of all vintages would probably
21 be, you know, to the left of center on this.
22 Probably in the 150 range.

23 And therefore, they won't look like
24 they're in the middle. Most homes will probably
25 look like they have room to go to the middle, and

1 then to the right.

2 So, anyway, good job on all this. Thank
3 you very much for all your hard work.

4 PRESIDING MEMBER ROSENFELD: Thank you,
5 Bruce. Mark Kamrath from SMACNA.

6 MR. KAMRATH: Thank you, Commissioners
7 and Staff. SMACNA, being the -- well, the union
8 group of air conditioning contractors, is who I
9 speak for. I'm also a contractor within that
10 group.

11 And I would like to thank you, as well,
12 for your work. We see this HERS as going to be a
13 great tool for our residential contractors that
14 are involved in responsible building.

15 And I think that's what everybody in the
16 room wants to see things go towards, is
17 responsible building. And this can certainly be
18 used for that.

19 I'm also pleased to follow Bruce,
20 wherever he went, and my brethren in the utility
21 world. We, as contractors, and our group on the
22 energy and environmental policy, we find ourselves
23 in an enviable position of trying to steer down
24 the river with one foot in each canoe, a couple
25 different canoes.

1 As long as those canoes are tracking
2 we're doing okay. When they start moving apart it
3 gets a little painful. We find ourselves
4 oftentimes having to even juggle three canoes.
5 And that makes it even more fun.

6 And these three would be your work, and
7 the work of the CPUC, as well as the work of the
8 utilities. And being involved with all of those,
9 we are seeing in a grand scheme a convergence,
10 which is promising.

11 But what Bruce highlighted is what we're
12 also seeing, a different metric in considering
13 efficiency changes and efficiency upgrades in
14 efficiency approaches.

15 In you venue it's strictly residential.
16 But we're seeing it across the board in
17 commercial, as well.

18 A different way of thinking. The
19 utilities now are in the middle of trying to get
20 their portfolios worked through the CPUC. One of
21 the things in that is going to turn into rebate,
22 which will turn into perhaps some financial
23 impetus to what you guys are doing here.

24 What we're seeing from them is they want
25 to -- they've made statements that we don't want

1 to do widgets anymore. We don't want to give you
2 money for a thermostat, money for a whole house
3 fan, or get a new outside air conditioning unit
4 that's more efficient. We'll give you money for
5 that. Without considering its effect on the whole
6 system of that house.

7 So, I, too, as a contractor would like
8 to kind of second the approach that these guys are
9 doing, third the approach that Bruce mentioned,
10 that there is a new way of thinking. And to the
11 extent that your Committee and your work sort of
12 aligns like that, it's going to help the industry,
13 our industry, move forward in a more efficacious
14 way.

15 That being said, I'd like to address my
16 second issue. And that would be this issue of
17 building performance contractors. We would be
18 finding ourselves in the specialty contractor
19 range. We're HVAC contractors.

20 I would contend that there would be no
21 better contractor to give a performance building
22 title to in the air conditioning realm than a
23 well-trained air conditioning contractor.

24 Certainly that doesn't preclude the
25 general contractors from getting their

1 certification, as well, or their licensing, as
2 well. But if we limit it to that, we have the
3 danger of them then going to maybe a noncompetent
4 contractor under their umbrella.

5 I would think that specialty contractors
6 that have the desire and the interest to be a
7 performance contractor or an energy performance
8 contractor, and went through the effort to get
9 that designation, that that would be the best of
10 both worlds. If you had that contractor,
11 subcontractor working with a general contractor,
12 then you could get the best performance of it all.

13 And also to mention that there's nothing
14 to say to prevent that subcontractor, us, as a
15 performance contractor, to act as a prime
16 contractor, bringing in specialty expertise on the
17 insulation side or the electrical side, as is
18 needed. Who perhaps would be even their own
19 performance contractors, as well.

20 So I think there's great value to
21 allowing specialty contractors to still be
22 considered as a performance contractor, as well.

23 So, thank you. Good job. Help keep my
24 canoes together, if you would, and we'll move
25 ahead together.

1 MR. PENNINGTON: Could I ask a question?

2 PRESIDING MEMBER ROSENFELD: Please,

3 Bill.

4 MR. KAMRATH: Oh, certainly.

5 MR. PENNINGTON: I'm wondering, Robert
6 was speculating that perhaps there might be some
7 restriction in licensing law to having a specialty
8 contractor perform the duties that are laid out
9 here for a building performance contractor.

10 Are you aware of any restrictions like
11 that? Or any --

12 MR. KAMRATH: I am not, but I haven't
13 done the work to look, either. So, I can't answer
14 that.

15 I know, I can step over to the side and
16 be my own personal company. We are air
17 conditioning contractors, we are plumbers, we also
18 have a general contractors license. And so we
19 have taken means and methods around that to be
20 able to allow ourselves to address licensing
21 issues like that.

22 So, for us, personally, I don't think
23 that would be an issue. But perhaps he's very
24 correct on that. I don't know.

25 MR. PENNINGTON: Thank you.

1 PRESIDING MEMBER ROSENFELD: Mike

2 Bachand from CalCERTS. Good morning.

3 MR. BACHAND: Good morning. Good

4 approaching noon. Thank you, Commissioners and

5 Staff. I want to especially thank you for being

6 the referees between the providers, but I'm

7 haunted by a vision of Bill Pennington in a black-

8 and-white-striped shirt.

9 (Laughter.)

10 MR. BACHAND: I hope that vision doesn't

11 stay with me. I do have some other concerns

12 besides the referee thing.

13 Regarding, again, the contractor's

14 licensing that Robert Scott was talking about, I

15 want to find out if you've contemplated who

16 verifies that the contractor's license is active,

17 invalid, incorrect.

18 And I want to suggest that language be

19 put in the standards to address that, because we

20 do get clarifications from staff on things that

21 we're not sure of. And we appreciate those

22 clarifications. But they can be implemented in

23 spotty fashion possibly. They may or may not be

24 enforceable.

25 And so I would like to see something a

1 little bit more concrete in the standards that
2 says not only who does this verification, but what
3 are the ramifications if it's in place, and then
4 not in place. A little bit of something other
5 than guidance on that would be, I think, very
6 important. And I would appreciate something on
7 that.

8 I echo the other comments that Robert
9 Scott made, and I appreciate those, with respect
10 to the contracting community.

11 And also, having been a general
12 contractor, myself, at times, and having been
13 acting as a builder's representative for
14 construction purposes, it is my understanding, and
15 this needs due diligence, but it is my
16 understanding that a subcontractor classification
17 does not allow that contractor to be involved with
18 subbing to other general trades in a way that a B
19 contractor does. So I think that should be looked
20 at very carefully, because that's my understanding
21 of that situation.

22 That's all I have to say. And thank you
23 for your time.

24 PRESIDING MEMBER ROSENFELD: Thank you.
25 Jon McHaffy -- McHugh, oh, gee, I'm sorry, I

1 didn't recognize you, Jon. Good morning; it's one
2 more minute before noon

3 (Laughter.)

4 MR. McHUGH: Always right before
5 lunchtime. Thank you very much.

6 Could we go to the slide that talks
7 about the cost effectiveness rating? I wasn't
8 actually planning on talking, but since --

9 PRESIDING MEMBER ROSENFELD: The famous
10 slide 27.

11 MR. McHUGH: There we go. When you look
12 at the cost effectiveness of measures, as I
13 remember what we're doing for the benefit/cost
14 ratio is we look at the first year energy savings
15 divided by the annual mortgage payment for the
16 measure.

17 Now, and that's over 30 years. And what
18 probably creates a little bit of a problem in
19 terms of evaluating insulation versus equipment
20 versus lighting is that there is no measure cost
21 here. And so something that might have a measure
22 live of five years is now actually being -- its
23 cost is being divided over 30 years.

24 So, either you might want --

25 PRESIDING MEMBER ROSENFELD: Wait, wait,

1 wait a minute. Don't understand.

2 MR. McHUGH: Okay, so --

3 PRESIDING MEMBER ROSENFELD: If it's the
4 HVAC --

5 MR. McHUGH: -- let's say it's HVAC and
6 it has --

7 PRESIDING MEMBER ROSENFELD: -- its cost
8 is annualized over 16 years or something --

9 MR. PENNINGTON: So, Jon misspoke. He
10 said measure cost, and he meant measure life.
11 He's saying that the measure life can vary.

12 PRESIDING MEMBER ROSENFELD: Oh, it does
13 vary, right.

14 MR. PENNINGTON: Yeah, --

15 PRESIDING MEMBER ROSENFELD: And it
16 tends to be 50 years for -- or 30 years for
17 insulation and maybe only half of that for HVAC.

18 MR. McHUGH: Okay, so if you look at
19 that second bullet in the area in red it says the
20 first year energy savings divided by the annual --
21 additional annual mortgage payment. And it
22 doesn't have any discussion that the mortgage
23 payment is -- the mortgage payment over the life
24 of the --

25 PRESIDING MEMBER ROSENFELD: Wait, I'm

1 sorry, which --

2 MR. McHUGH: -- equipment --

3 PRESIDING MEMBER ROSENFELD: -- line are
4 you reading?

5 ASSOCIATE MEMBER PFANNENSTIEL: Bullet
6 two.

7 PRESIDING MEMBER ROSENFELD: Bullet two,
8 evaluate all possible measures in the group and
9 write measures in terms of benefit-to-cost ratio.
10 Parentheses, first year energy savings divided by
11 additional annual mortgage payments.

12 Yes. And --

13 MR. McHUGH: Okay, so let's say I have a
14 piece of equipment that lasts ten years, right?

15 PRESIDING MEMBER ROSENFELD: Okay.

16 MR. McHUGH: And that piece of
17 equipment, its cost is being amortized over the 30
18 years of your mortgage. So, either you need to
19 have a additional discounted cost stream that
20 shows at 20 years and at 30 years of these
21 discounted costs, or you say, well, my mortgage
22 payment is going to be over the life of the piece
23 of equipment.

24 But by taking things different effective
25 lifespans, you're actually, by accident, creating

1 more value for things that have shorter lifespans.

2 PRESIDING MEMBER ROSENFELD: I'm

3 sorry, --

4 MR. MCHUGH: Okay, so let's just --

5 PRESIDING MEMBER ROSENFELD: Let me say

6 what I've --

7 MR. MCHUGH: -- assume we have a --

8 PRESIDING MEMBER ROSENFELD: -- always

9 understood. You have a ten-year lifespan piece of
10 HVAC equipment and you have a 30-year insulation
11 or even duct sealing.

12 And I thought each one of those was
13 evaluated on its own lifetime.

14 MR. MCHUGH: Bill, can you clarify?

15 MR. PENNINGTON: Well, at the last
16 meeting we said probably doing present-value
17 calculations and explaining that to consumer is
18 beyond the pale. So, Jon's correct about doing
19 present-value analysis, you would want to account
20 for the use of the life and be careful about that,
21 and do discounting.

22 And you might have multiple measures
23 with different useful lives. And you would want
24 to account for all that.

25 PRESIDING MEMBER ROSENFELD: Yeah.

1 MR. PENNINGTON: That's very complex to
2 present to a consumer. And the comment at the
3 last workshop is that that was probably beyond the
4 pale of what we would do.

5 So, this approach would not do a
6 consideration of the useful life. It would
7 basically be comparing the first cost against the
8 annual -- the first year annual mortgage
9 reduction. So it would be a first year cost
10 evaluation.

11 PRESIDING MEMBER ROSENFELD: Oh, boy, I
12 guess you're right.

13 MR. MCHUGH: So that would actually give
14 some --

15 MR. PENNINGTON: So we can complicate
16 this, if you want, yeah. Take out our pens here
17 and go crazy.

18 PRESIDING MEMBER ROSENFELD: Okay, thank
19 you for that enlightenment.

20 MR. CENICEROS: Would you like a
21 suggestion for a fix to that before his next
22 question?

23 PRESIDING MEMBER ROSENFELD: I'm sorry,
24 who's --

25 MR. MAEDA: Bruce.

1 MR. McHUGH: Bruce.

2 MR. CENICEROS: I can give --

3 PRESIDING MEMBER ROSENFELD: Bruce, say
4 that louder or come up.

5 MR. SPEAKER: Come up to the mike,
6 Bruce.

7 ASSOCIATE MEMBER PFANNENSTIEL: You have
8 to come up to the mike.

9 PRESIDING MEMBER ROSENFELD: Sorry.

10 MR. SPEAKER: He blends with the
11 background.

12 (Laughter.)

13 MR. CENICEROS: Okay, so I think the
14 dilemma here is the way that would be best optimal
15 to calculate cost effectiveness from the
16 standpoint of, you know, comparing measures, is
17 not what you'd want to present to the consumer.

18 So, if you think there may be an
19 approach where the calculations are done based on
20 the present value or lifecycle cost analysis, but
21 then the end result or even the measure-by-measure
22 numbers for cost effectiveness based on over the
23 30-year life of the mortgage would be what you
24 presented to the consumer.

25 So the engine performances are based on

1 lifecycle costs. The presentation calculates it
2 the way you have up here.

3 MR. MIR: We can -- one way of solving
4 this is to -- this is where we're ranking measures
5 within the group. Instead of doing it on a 30-
6 year mortgage payment for that calculation, you
7 could do it the mortgage payment based on the life
8 of that measure. And then it would be apples-to-
9 apples.

10 It's something we'll have to think
11 about.

12 MR. CENICEROS: Right, and then you
13 would --

14 MR. MIR: And then that wouldn't have to
15 be presented to the consumer because it's just in
16 the background to determine the ranking of the
17 measures.

18 MR. CENICEROS: Right. This is a very
19 important point that Jon pointed out here that we
20 need to correct for, because it's going to tilt
21 the results in a way we wouldn't want, I think.

22 PRESIDING MEMBER ROSENFELD: Okay, well,
23 you've educated me. I don't know the answer. All
24 right, we're into good afternoon. Randy Reidel.

25 MR. REIDEL: Commissioners, thank you

1 for the opportunity. Randel Reidel; I'm the
2 Managing Director of the California Building
3 Performance Contractors Association. And I always
4 wanted to be an afternoon speaker, so, thank you
5 for the opportunity.

6 (Laughter.)

7 MR. REIDEL: I wanted to mention just
8 two things. In support of what Erik said
9 previously, as representing, I believe it was
10 SMACNA group, is that correct? Did I get that
11 right? I could go get his card and figure it out,
12 but --

13 MR. SPEAKER: Yes.

14 MR. REIDEL: -- that was correct? Thank
15 you, thank you.

16 In my earlier career, also at the Energy
17 Commission, I had an opportunity to be a board
18 member at ACCA, which is the Air Conditioning
19 Contractors Association, and one of the things
20 that I used to point out to them whenever I had an
21 opportunity to speak to them as a group, was
22 similar -- I can't quite do it here because you've
23 hidden both the supply and returns very nicely in
24 this room, but I would say to them, you know, a
25 lot of you have become very concerned and are

1 adopting being able to take control of the loss
2 that's happening through duct systems by sealing
3 those ducts. And many times they're in the attic
4 where it's very hot, so you're insulating them
5 better.

6 And so that's really remarkable, but
7 you're missing a real big part of the duct system
8 in the plenum. And that is that we, right now,
9 we're walking and talking actually in a large
10 plenum that's part of the air conditioning system.

11 Because if we could find it, we could
12 see the supplies and the returns on the other
13 side. So we're just part of the duct system, it's
14 where we live.

15 So, therefore, the analogy would be is
16 the extension of that duct system is to the
17 exterior walls of this building.

18 So, in support of what he had to say, I
19 can think of no better actual contractor that
20 would be appropriate for doing a whole house or
21 home based approach.

22 The other thing is that they are
23 required in their sizing of the equipment, at
24 least they should be, using sizing calculations,
25 room-by-room sizing load calculations. And by

1 doing so, they need to also understand the air
2 infiltration, ex-filtration, the integrity of the
3 thermal envelope, windows, et cetera.

4 And, again, that is a large part of what
5 building performance contractors do.

6 One other thing I would mention is that
7 when we take care of the envelope, Art, like you
8 were concerned about, many times what we do is
9 that we're enabling us to reduce the sizing of the
10 HVAC system, mainly the air conditioning, almost
11 up to half reduction.

12 So if we have a 5 ton, many times we can
13 take it down to 2.5 or even 2 ton. And, you know,
14 you prepared a very notable chart that you use a
15 lot in your particular displays or presentations
16 that you do, showing the load demand curve on hot
17 summer days.

18 And if you think about reducing, you
19 know, the air conditioning load by changing out
20 these systems, based on what we did with the
21 thermal integrity improvements, we, many times,
22 can reduce sizable amounts of tonnage reduction
23 off of the grid.

24 PRESIDING MEMBER ROSENFELD: But, Randy,
25 if you do in sequence all cost effective measures,

1 you will end up at the same result. You may
2 calculate the air conditioners downsizing first,
3 and you'll get half way there.

4 But then if you go ahead and calculate,
5 I'll give my typical example, insulation and a
6 white roof, you will further reduce the air
7 conditioning capacity. And it'll show up at the
8 end of the run as just the half, the 50 percent
9 reduction you talked about.

10 MR. REIDEL: Okay, I'm not at a skill
11 level to actually debate that with you at this
12 time. And I would --

13 MR. PENNINGTON: So if the --

14 MR. REIDEL: -- ask anybody else to
15 please chime in on my behalf.

16 MR. PENNINGTON: If the HVAC system is
17 the first measure that you choose, you don't make
18 any reduction in sizing --

19 PRESIDING MEMBER ROSENFELD: Yeah, you
20 do, at the end. At least -- I don't know the
21 application programs, but as you go in DOEII at
22 the last run it takes everything into
23 consideration. It tells you how to size the air
24 conditioner. And you get credit for having
25 painted the roof white, or --

1 MR. PENNINGTON: You're out of savings.
2 You're out of savings at that point. You've made
3 decisions already about what investments you're
4 going to make. You've spent the amount of money
5 that you can afford for that house and you're out
6 of savings to get those --

7 PRESIDING MEMBER ROSENFELD: Bill, we'll
8 have to look at it with a real program, and do it
9 offline.

10 ASSOCIATE MEMBER PFANNENSTIEL: Yeah,
11 let's --

12 MR. REIDEL: Thank you very much.

13 PRESIDING MEMBER ROSENFELD: Thank you,
14 Randy. Nice to see you here again.

15 MR. REIDEL: Nice to see you, too.

16 PRESIDING MEMBER ROSENFELD: Are we out
17 of blue cards? Comments?

18 ASSOCIATE MEMBER PFANNENSTIEL: Back to
19 Helen, I think.

20 PRESIDING MEMBER ROSENFELD: Helen.

21 MS. LAM: Okay, no more comments? Okay,
22 so, we going to close up today's meeting by
23 presenting you the estimated schedule of the HERS
24 regulations, which, as I stated at the beginning
25 of the meeting, after today's public hearing, we

1 are requesting that if you have any additional
2 written comments, to submit them to us by October
3 24th.

4 And I know that we have a 45-day public
5 comment period. But of course, we encourage you
6 to submit your comments at your earliest possible
7 date. And this way, you know, we will insure that
8 we have sufficient time to adequately address each
9 of the comments and concerns.

10 And so, Bill, I guess at this point we
11 can safely say that we will anticipate
12 modification to the 45-day language. So, if
13 that's the case, then we will not likely be
14 adopting the 45-day language at the November 19
15 business hearing.

16 Therefore, we will anticipate to release
17 the 15-day language about early December. And so
18 that we can have an anticipated Commission
19 adoption date of the 15-day language at the
20 December 17, 2008 business meeting. And this will
21 be separately noticed.

22 And with that, we hope to have the
23 regulations take effect on July 1, 2009.

24 PRESIDING MEMBER ROSENFELD: Thank you,
25 Helen.

1 I realize that before going on, Helen, I
2 have a feeling I saw one tentative hand stuck up.
3 Did I cut somebody off? Did I ignore someone?
4 No.

5 MR. KAMRATH: I think you're referring
6 to me.

7 PRESIDING MEMBER ROSENFELD: Yeah.

8 MR. KAMRATH: No, I was going to help
9 with Randy, but you guys got it figured.

10 PRESIDING MEMBER ROSENFELD: We'll meet
11 offline.

12 Okay, well, thank you very much. Don't
13 forget your comments. Bye.

14 (Whereupon, at 12:15 p.m., the Committee
15 workshop was adjourned.)

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CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter,
do hereby certify that I am a disinterested person
herein; that I recorded the foregoing California
Energy Commission Committee Workshop; that it was
thereafter transcribed into typewriting.

I further certify that I am not of
counsel or attorney for any of the parties to said
workshop, nor in any way interested in outcome of
said workshop.

IN WITNESS WHEREOF, I have hereunto set
my hand this 27th day of October, 2008.

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